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BUSINESS AND MANAGEMENT  
EDUCATION AND EDUCATIONAL RESEARCH  
POLITICAL SCIENCE  
SOCIOLOGY AND HEALTHCARE

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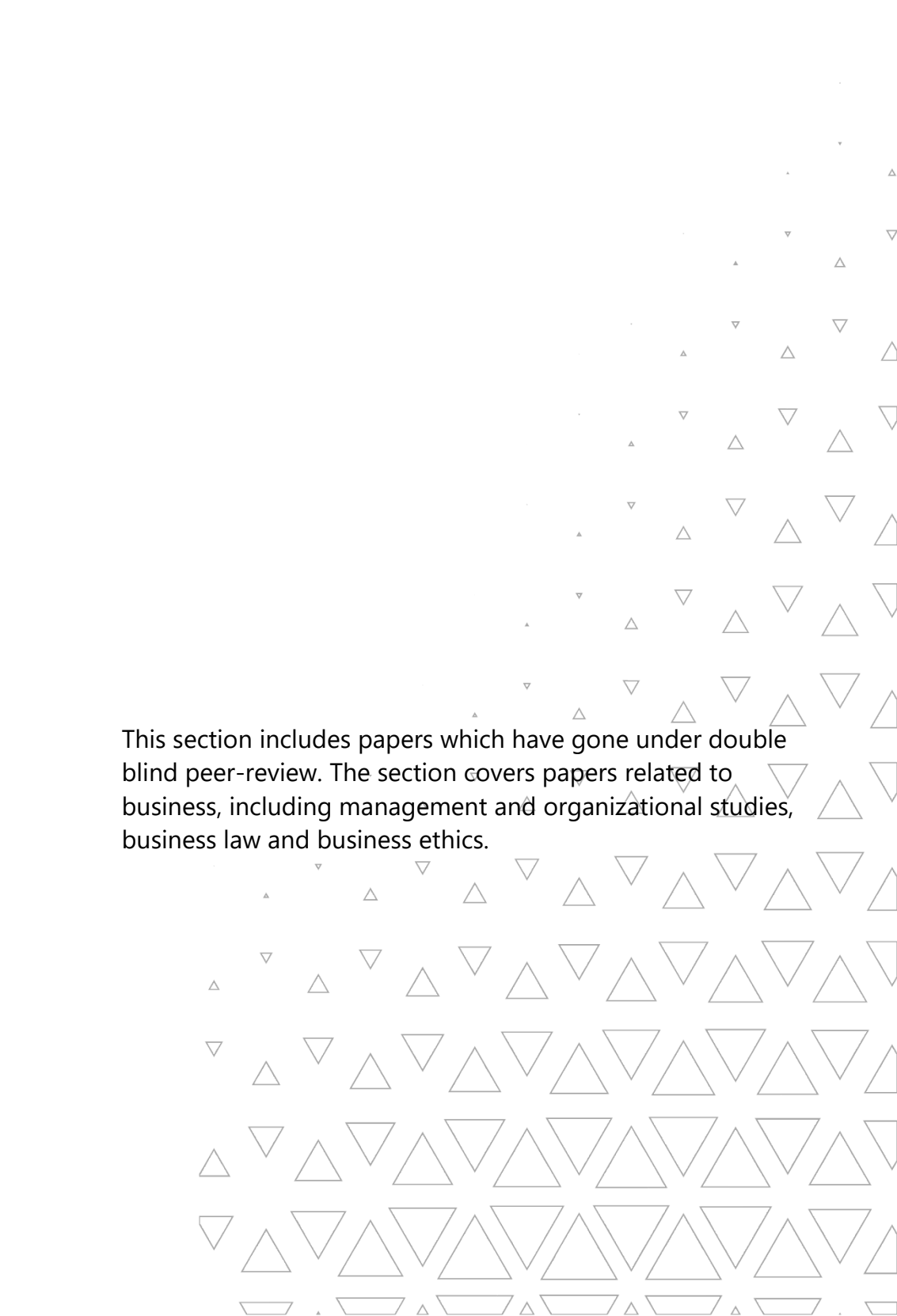
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BUSINESS AND MANAGEMENT

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This section includes papers which have gone under double blind peer-review. The section covers papers related to business, including management and organizational studies, business law and business ethics.



# **BULGARIA'S TRADE FOOTPRINT IN THE EUROPEAN UNION**

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## **ABSTRACT**

The study presents the results from the analysis of the trade relations between the Bulgarian economic system and the economics of the European Union member-states. The main focus of the article is to analyze both the relations and impact of Bulgaria in EU context. The study examines how the trade relations are affected from the variety of factors in the external environment. The article concludes with a comparative analysis that places Bulgaria's trade performance in the context of other EU member-states. In conclusion, the article summarizes the key findings of the research and offers policy recommendations for improving trade relations between Bulgaria and the EU.

**Keywords:** *trade relations, European integration, economic impact*

## **INTRODUCTION**

International trade is a key activity for the development of economic systems, the role of which is further strengthened by the ongoing processes of intensive globalization and integration. Changes in related key economic indicators such as consumption, import, and trade balance have a significant impact on the economic performance of individual countries. This article represents a comprehensive study of the trade relations between Bulgaria and the state-members of the European Union (EU) in the period 2010-2020 using the methodology of input-output model and related to it FIGARO tables. In today's world, where economic integration and free trade play an important role in the global economic landscape, understanding the links and dynamics between Bulgaria and its European partners is essential. These relations are extremely important for Bulgarian economic development. After joining the EU in 2007, Bulgaria became part of the largest single market in the world, and trade relations with other member-states gained strategic importance.

## **BACKGROUND**

The previous studies have focused on the historical aspect of trade relations between Bulgaria and the EU. In particular, they analyze the period since Bulgaria's accession to the EU in 2007 and how the country's membership has changed the terms and dynamics of trade with other EU members. It is important to note that this period was characterized by intense changes in trade relations that require greater attention and analysis. [1]

The process of Bulgaria's accession to the European Union officially began in 1995, when the country applied for membership. After long and intensive negotiations and reforms in various fields, Bulgaria made significant progress and finally became an official member of the EU on January 1, 2007. Bulgaria's accession to the EU represents a historic step for the country following a period of transition following the fall of the communist regime in 1989 and the end of the Balkan Wars in the early 20th century. EU membership not only confirms Bulgaria's commitment to European values and standards, but also opens doors to extensive opportunities for economic development and cooperation with other EU members.

With its accession to the European Union, Bulgaria has become part of the largest internal market in the world, providing significant opportunities to expand its trade relations with other EU members. The country has taken a number of steps and measures to adapt its trade policies to EU standards and requirements. One of the first and most essential steps after Bulgaria's accession to the EU was the harmonization of its legislation and regulatory frameworks with European standards. This included the adoption of a number of new trade regulations that regulate the standards of goods and services that Bulgaria can export to the European market.

An important aspect of Bulgaria's trade policy within the EU is the participation in the customs union of the European Union. This customs union is characterized by the free movement of goods between EU members and the absence of customs barriers between them. This provides Bulgarian exporters with significant advantages and easy access to EU markets. In addition, Bulgaria is an active participant in EU trade negotiations and initiatives at the international level. It participates in the formation of the EU's trade policies and agreements with third countries and regions. This includes negotiating trade agreements, trade facilitation measures and participating in numerous international forums and organizations dealing with trade and economic cooperation.

## **WHAT STAYS BEHIND THE RESULTS?**

To analyze Bulgaria's trade relations with the EU, the input-output model is used. This methodological approach allows analysis of trade flows and interactions between different industries of the economy. In the study is used the data from national statistical institutions, Eurostat and other similar sources that provide information on the value and volume of trade between Bulgaria and other EU members. This choice of data is essential because, based on the input-output model, it requires information on trade flows in different industries of the economy. This analytical approach is suitable for the adequate consideration of trade relations between Bulgaria and the EU and allows a detailed analysis of their impacts on the economic activity of the country. This method combines the advantages of statistical and econometric models with the extensive data available on trade flows and is suitable for our scientific purpose.

The model provides strong foundation to analyse the impact of the main factors that affect the trade policy of the country and its whole development. As a major factors are outlined the economic that are essential for understanding Bulgaria's trade relations within the EU. They include the economic growth and internal market; the competitiveness and productivity of the country and exchange rates.

One of the key advantages of Bulgaria's EU membership is access to the large EU internal market with over 500 million consumers. Stable economic growth in the EU provides Bulgarian companies with opportunities to export goods and services. However, this growth may vary from country to country and have different impacts on different industries of the economy. Second, the ability of Bulgarian companies to compete on the European and world market is essential for trade. Investments in innovation, education and workforce development play an important role in increasing the country's competitiveness. The last economic factor is the exchange rate that can affect the prices of goods and services exported and imported from Bulgaria. Fluctuations in exchange rates can affect the competitiveness of Bulgarian goods on the international market and affect trade flows.

Political factors also play an important role in Bulgaria's trade relations within the EU. As a major political factor, the author defines the diplomacy and international relations that can affect trade. Diplomatic incidents or conflicts may lead to restrictions on trade or violations of negotiated agreements. In the same logic, the trade agreements between the EU and other countries or regions may affect Bulgaria's trade flows. These agreements set the terms and conditions of trade between the parties and can open up new trade opportunities. Last but not least, the political stability and security of the legal environment in Bulgaria create conditions for attracting foreign investments and for the sustainable development of trade relations.

From the regulatory aspect, customs and trade barriers can restrict or facilitate trade. The EU's extensive regulations and standards that govern the goods and services offered on the market affect the way that countries manage their trade activities. Bulgaria must conform its products and services to these standards in order to have free access to the EU market. And finally, the regulatory environment for investment can influence the attraction of foreign investors and the development of manufacturing and export activities, which in turn affects trade.

## **TRADING PATTERNS AND TRENDS**

The trade relations between Bulgaria and the other member-states of the European Union are analysed from two aspects: what the Bulgarian economy provides as an export for the other economics, and what the economics of the member-states are providing to Bulgaria as an import. In each of the logics are

studied the main trends regarding the relations between countries, as well as the importance of the economic industries for these relations.

Table 1 presents the share of the Bulgarian products that the economic provides for each member-state of the European Union. At the beginning of the analysed period (2010) the main trade partner of Bulgaria is Italy where are directed 20,41% of all export product. Other important trade partners in 2010 are Germany [16,12%] and Greece [11,27%]. The weakest connections of the country are with Estonia [0,04%] and Latvia [0,07%].

In the end of the period (2020) the main trade partner for Bulgaria is Germany [19,93%], followed by Italy [13,40%] and Romania [10,58%]. Low level of trade dependence is defined between Bulgaria and Latvia [0,09%] and Bulgaria and Luxembourg [0,13%].

**Table 1.** *Share of the export of Bulgarian products for the EU member-states (in % for the period 2010-2020)*

|                | 2010   | 2011   | 2012   | 2013   | 2014   | 2015   | 2016   | 2017   | 2018   | 2019   | 2020   |
|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Austria        | 5,27%  | 4,93%  | 4,16%  | 4,91%  | 5,28%  | 5,19%  | 5,13%  | 5,12%  | 4,73%  | 4,56%  | 4,56%  |
| Belgium        | 5,58%  | 5,01%  | 5,39%  | 6,94%  | 7,22%  | 6,13%  | 5,99%  | 7,72%  | 6,59%  | 7,29%  | 7,29%  |
| Croatia        | 0,67%  | 0,49%  | 0,47%  | 0,26%  | 0,44%  | 0,35%  | 0,62%  | 0,41%  | 0,53%  | 0,42%  | 0,42%  |
| Cyprus         | 0,18%  | 0,19%  | 0,30%  | 0,17%  | 0,23%  | 0,44%  | 0,49%  | 0,22%  | 0,24%  | 0,38%  | 0,38%  |
| Czech Republic | 2,80%  | 4,60%  | 3,35%  | 2,70%  | 3,29%  | 2,68%  | 2,70%  | 3,21%  | 3,52%  | 3,10%  | 3,10%  |
| Denmark        | 0,71%  | 1,10%  | 0,77%  | 0,77%  | 0,95%  | 1,42%  | 1,23%  | 1,25%  | 1,06%  | 1,34%  | 1,34%  |
| Estonia        | 0,04%  | 0,04%  | 0,11%  | 0,15%  | 0,13%  | 0,08%  | 0,08%  | 0,09%  | 0,09%  | 0,16%  | 0,16%  |
| Finland        | 0,33%  | 0,70%  | 0,55%  | 0,31%  | 0,42%  | 0,72%  | 0,80%  | 0,55%  | 0,45%  | 0,58%  | 0,58%  |
| France         | 4,44%  | 5,72%  | 7,29%  | 6,86%  | 6,08%  | 6,71%  | 6,18%  | 6,77%  | 4,80%  | 6,86%  | 6,86%  |
| Germany        | 16,12% | 17,09% | 16,17% | 20,42% | 16,74% | 19,05% | 18,63% | 19,31% | 20,66% | 19,93% | 19,93% |
| Greece         | 11,27% | 10,18% | 11,18% | 11,07% | 9,84%  | 7,76%  | 6,91%  | 6,50%  | 7,41%  | 7,69%  | 7,69%  |
| Hungary        | 2,56%  | 2,43%  | 1,88%  | 2,96%  | 2,61%  | 3,27%  | 3,23%  | 3,64%  | 3,44%  | 3,17%  | 3,17%  |
| Ireland        | 1,05%  | 0,38%  | 0,13%  | 0,13%  | 0,43%  | 0,88%  | 0,77%  | 0,88%  | 1,23%  | 0,98%  | 0,98%  |
| Italy          | 20,41% | 18,73% | 22,44% | 19,42% | 17,90% | 15,93% | 16,50% | 13,67% | 14,87% | 13,40% | 13,40% |
| Latvia         | 0,07%  | 0,09%  | 0,10%  | 0,07%  | 0,06%  | 0,07%  | 0,06%  | 0,07%  | 0,08%  | 0,09%  | 0,09%  |
| Lithuania      | 2,66%  | 0,14%  | 0,15%  | 0,21%  | 0,21%  | 0,38%  | 0,19%  | 0,19%  | 0,19%  | 0,21%  | 0,21%  |
| Luxembourg     | 0,04%  | 0,05%  | 0,16%  | 0,15%  | 0,11%  | 0,11%  | 0,17%  | 0,21%  | 0,08%  | 0,13%  | 0,13%  |
| Malta          | 0,26%  | 0,33%  | 0,13%  | 0,05%  | 0,07%  | 0,11%  | 0,23%  | 0,26%  | 0,24%  | 0,27%  | 0,27%  |
| Netherlands    | 1,36%  | 2,69%  | 3,82%  | 2,79%  | 3,37%  | 4,14%  | 4,08%  | 2,99%  | 2,78%  | 2,67%  | 2,67%  |
| Poland         | 2,97%  | 2,81%  | 2,60%  | 2,55%  | 3,39%  | 2,91%  | 3,44%  | 3,52%  | 3,46%  | 3,72%  | 3,72%  |
| Portugal       | 0,40%  | 0,51%  | 1,14%  | 0,79%  | 0,63%  | 0,44%  | 0,41%  | 0,44%  | 0,34%  | 0,51%  | 0,51%  |
| Romania        | 9,75%  | 14,61% | 10,16% | 8,46%  | 8,22%  | 8,82%  | 10,09% | 10,35% | 9,86%  | 10,58% | 10,58% |
| Slovakia       | 1,08%  | 0,95%  | 1,15%  | 1,21%  | 0,97%  | 1,03%  | 1,44%  | 1,90%  | 1,19%  | 1,42%  | 1,42%  |
| Slovenia       | 0,78%  | 1,26%  | 1,22%  | 1,67%  | 3,03%  | 4,17%  | 3,20%  | 2,95%  | 3,15%  | 1,37%  | 1,37%  |
| Spain          | 3,23%  | 2,83%  | 2,75%  | 2,84%  | 2,49%  | 2,77%  | 3,35%  | 4,61%  | 4,58%  | 3,68%  | 3,68%  |
| Sweden         | 0,76%  | 0,62%  | 0,66%  | 0,80%  | 1,25%  | 0,87%  | 1,36%  | 1,00%  | 1,90%  | 2,00%  | 2,00%  |
| UK             | 5,23%  | 1,53%  | 1,76%  | 1,32%  | 4,62%  | 3,59%  | 2,72%  | 2,15%  | 2,55%  | 3,51%  | 3,51%  |

*Source: Author's calculations*

Regarding the industrial structure of the export, industry “Manufacturing” is the main export industry [53,82% in 2010 and 49,98% in 2020]. The second big exporter for Bulgarian economic is industry “Wholesale and retail trade; repair of motor vehicles and motorcycles” with share of 14,59% at the beginning of the studied period and 19,54% at its end. The lowest share of the industrial product

from “Public administration and defence; compulsory social security” [0,03%] is exported in the studied period, as well as the product of industry “Human health and social work activities” [0,04%].

**Table 2.** *Share of the export from Bulgarian industries (in % for the period 2010-2020)*

|  | 2010   | 2011   | 2012   | 2013   | 2014   | 2015   | 2016   | 2017   | 2018   | 2019   | 2020   |
|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Agriculture, forestry and fishing                                    | 6,78%  | 7,13%  | 7,07%  | 6,47%  | 6,28%  | 5,19%  | 5,27%  | 5,20%  | 5,50%  | 4,69%  | 4,69%  |
| Mining and quarrying   | 3,32%  | 2,31%  | 1,33%  | 1,66%  | 2,35%  | 2,56%  | 2,97%  | 2,14%  | 2,26%  | 1,44%  | 1,44%  |
| Manufacturing  | 53,82% | 52,39% | 53,05% | 55,25% | 50,90% | 49,89% | 49,11% | 48,24% | 47,99% | 49,98% | 49,98% |
| Electricity, gas, steam and air conditioning supply                  | 2,66%  | 2,93%  | 3,64%  | 2,93%  | 1,80%  | 2,14%  | 2,62%  | 2,86%  | 2,42%  | 2,32%  | 2,32%  |
| Water supply; sewerage; waste management and remediation activities  | 1,31%  | 1,10%  | 0,65%  | 0,68%  | 1,20%  | 2,22%  | 2,25%  | 1,87%  | 1,91%  | 2,26%  | 2,26%  |
| Construction   | 1,24%  | 1,33%  | 1,54%  | 0,79%  | 1,21%  | 1,68%  | 0,94%  | 1,22%  | 1,35%  | 1,42%  | 1,42%  |
| Wholesale and retail trade; repair of motor vehicles and motorcycles | 14,59% | 17,46% | 17,32% | 17,05% | 19,27% | 19,93% | 19,74% | 21,16% | 21,48% | 19,54% | 19,54% |
| Transporting and storage   | 7,52%  | 7,35%  | 7,29%  | 7,55%  | 8,66%  | 8,45%  | 8,85%  | 8,59%  | 8,90%  | 8,84%  | 8,84%  |
| Accommodation and food service activities                            | 0,19%  | 0,17%  | 0,16%  | 0,18%  | 0,21%  | 0,19%  | 0,21%  | 0,25%  | 0,24%  | 0,23%  | 0,23%  |
| Information and communication  | 2,61%  | 2,80%  | 2,77%  | 2,58%  | 2,53%  | 2,32%  | 2,84%  | 3,10%  | 2,71%  | 3,61%  | 3,61%  |
| Financial and insurance activities                                   | 0,71%  | 0,54%  | 0,61%  | 0,44%  | 0,35%  | 0,40%  | 0,45%  | 0,42%  | 0,46%  | 0,54%  | 0,54%  |
| Real estate activities   | 0,38%  | 0,14%  | 0,11%  | 0,10%  | 0,13%  | 0,12%  | 0,14%  | 0,16%  | 0,17%  | 0,14%  | 0,14%  |
| Professional, scientific and technical activities                    | 2,78%  | 2,48%  | 2,39%  | 2,39%  | 2,73%  | 2,75%  | 2,76%  | 2,68%  | 2,42%  | 2,83%  | 2,83%  |
| Administrative and support service activities                        | 1,52%  | 1,39%  | 1,67%  | 1,56%  | 1,60%  | 1,60%  | 1,32%  | 1,45%  | 1,73%  | 1,64%  | 1,64%  |
| Public administration and defense; compulsory social security        | 0,01%  | 0,01%  | 0,03%  | 0,04%  | 0,05%  | 0,03%  | 0,03%  | 0,03%  | 0,03%  | 0,03%  | 0,03%  |
| Education  | 0,26%  | 0,23%  | 0,16%  | 0,15%  | 0,28%  | 0,17%  | 0,16%  | 0,20%  | 0,12%  | 0,13%  | 0,13%  |
| Human health and social work activities                              | 0,07%  | 0,06%  | 0,04%  | 0,04%  | 0,04%  | 0,06%  | 0,04%  | 0,06%  | 0,04%  | 0,04%  | 0,04%  |
| Arts, entertainment and recreation                                   | 0,18%  | 0,14%  | 0,12%  | 0,08%  | 0,28%  | 0,16%  | 0,18%  | 0,23%  | 0,14%  | 0,20%  | 0,20%  |
| Other services activities  | 0,04%  | 0,04%  | 0,04%  | 0,06%  | 0,12%  | 0,14%  | 0,11%  | 0,13%  | 0,15%  | 0,13%  | 0,13%  |

*Source: Author's calculations*

Interesting trend is formed regarding the import to Bulgaria (see Table 3). For the whole studied period the main trade partners of the country are Cyprus [16,39% in 2010 and 15,17% in 2020], Greece [14,37 in 2010 and 12,97% in 2020], and Romania [9,92% in 2010 and 13,87% in 2020]. As not intensive can

be defined the relations between Bulgaria and Luxembourg [0,10% in 2020] and Bulgaria and Czech Republic [0,29% in 2020].

**Table 3.** *Share of the import to Bulgaria from the EU member-states (in % for the period 2010-2020)*

|                | 2010   | 2011   | 2012   | 2013   | 2014   | 2015   | 2016   | 2017   | 2018   | 2019   | 2020   |
|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Austria        | 2,25%  | 1,92%  | 2,83%  | 3,42%  | 3,41%  | 3,74%  | 4,05%  | 3,85%  | 3,42%  | 3,10%  | 3,10%  |
| Belgium        | 3,23%  | 3,03%  | 3,52%  | 3,00%  | 3,24%  | 2,98%  | 2,82%  | 3,16%  | 3,31%  | 3,06%  | 3,06%  |
| Croatia        | 1,12%  | 0,93%  | 0,88%  | 0,67%  | 1,05%  | 0,87%  | 0,96%  | 1,59%  | 1,84%  | 1,14%  | 1,14%  |
| Cyprus         | 16,39% | 15,12% | 15,24% | 14,02% | 16,77% | 16,54% | 15,72% | 15,09% | 15,26% | 15,17% | 15,17% |
| Czech Republic | 0,09%  | 0,08%  | 0,10%  | 0,18%  | 0,13%  | 0,15%  | 0,13%  | 0,14%  | 0,17%  | 0,29%  | 0,29%  |
| Denmark        | 2,16%  | 0,89%  | 0,96%  | 0,73%  | 0,74%  | 1,02%  | 1,06%  | 1,10%  | 1,42%  | 1,52%  | 1,52%  |
| Estonia        | 9,12%  | 11,36% | 12,66% | 9,73%  | 9,08%  | 8,58%  | 7,72%  | 7,73%  | 8,61%  | 7,96%  | 7,96%  |
| Finland        | 3,67%  | 6,33%  | 3,94%  | 7,56%  | 6,20%  | 7,96%  | 7,36%  | 8,43%  | 7,19%  | 6,99%  | 6,99%  |
| France         | 4,77%  | 4,21%  | 4,89%  | 4,66%  | 5,65%  | 4,60%  | 5,26%  | 5,69%  | 4,67%  | 5,84%  | 5,84%  |
| Germany        | 0,36%  | 0,34%  | 0,30%  | 0,47%  | 0,49%  | 0,41%  | 0,59%  | 0,48%  | 0,40%  | 0,38%  | 0,38%  |
| Greece         | 14,37% | 12,50% | 12,63% | 14,18% | 12,42% | 12,54% | 11,77% | 11,50% | 12,75% | 12,97% | 12,97% |
| Hungary        | 0,23%  | 0,29%  | 0,20%  | 0,13%  | 0,21%  | 0,18%  | 0,26%  | 0,64%  | 0,60%  | 0,55%  | 0,55%  |
| Ireland        | 0,06%  | 0,09%  | 0,09%  | 0,13%  | 0,30%  | 0,31%  | 0,42%  | 0,25%  | 0,26%  | 0,19%  | 0,19%  |
| Italy          | 4,71%  | 0,23%  | 0,26%  | 0,45%  | 0,25%  | 0,58%  | 0,42%  | 0,33%  | 0,41%  | 0,45%  | 0,45%  |
| Latvia         | 3,80%  | 3,36%  | 3,20%  | 3,44%  | 2,40%  | 0,72%  | 0,92%  | 0,74%  | 0,69%  | 0,61%  | 0,61%  |
| Lithuania      | 3,90%  | 4,21%  | 3,87%  | 3,61%  | 3,89%  | 3,81%  | 3,70%  | 3,85%  | 3,72%  | 4,00%  | 4,00%  |
| Luxembourg     | 0,11%  | 0,09%  | 0,30%  | 0,07%  | 0,46%  | 0,08%  | 0,16%  | 0,15%  | 0,15%  | 0,10%  | 0,10%  |
| Malta          | 2,51%  | 2,79%  | 3,25%  | 2,81%  | 3,11%  | 3,82%  | 4,81%  | 4,20%  | 4,58%  | 4,05%  | 4,05%  |
| Netherlands    | 5,88%  | 6,37%  | 6,43%  | 5,33%  | 5,06%  | 4,88%  | 4,82%  | 4,28%  | 4,40%  | 4,59%  | 4,59%  |
| Poland         | 3,08%  | 2,94%  | 3,58%  | 4,19%  | 4,30%  | 4,78%  | 5,95%  | 5,98%  | 5,34%  | 5,51%  | 5,51%  |
| Portugal       | 0,94%  | 0,51%  | 0,58%  | 0,37%  | 0,43%  | 0,45%  | 0,41%  | 0,38%  | 0,74%  | 0,66%  | 0,66%  |
| Romania        | 9,92%  | 15,25% | 13,39% | 14,06% | 13,02% | 12,79% | 13,36% | 13,83% | 13,34% | 13,87% | 13,87% |
| Slovakia       | 1,17%  | 1,25%  | 0,91%  | 1,02%  | 1,00%  | 0,94%  | 1,05%  | 0,97%  | 0,92%  | 1,18%  | 1,18%  |
| Slovenia       | 2,02%  | 2,57%  | 2,37%  | 1,90%  | 1,91%  | 2,46%  | 1,90%  | 1,86%  | 1,94%  | 1,85%  | 1,85%  |
| Spain          | 0,61%  | 0,48%  | 0,47%  | 0,39%  | 0,35%  | 0,41%  | 0,44%  | 0,45%  | 0,43%  | 0,43%  | 0,43%  |
| Sweden         | 0,90%  | 0,95%  | 0,99%  | 1,25%  | 1,16%  | 1,08%  | 0,93%  | 0,99%  | 1,01%  | 0,92%  | 0,92%  |
| UK             | 2,63%  | 1,91%  | 2,15%  | 2,22%  | 2,98%  | 3,33%  | 3,00%  | 2,36%  | 2,42%  | 2,59%  | 2,59%  |

*Source: Author's calculations*

When analysing the structure of the import for Bulgarian economic system, the main share of it in 2010 is formed by industry "Mining and quarrying" with share of 44,89% in 2010 (see Table 4). The trend of this relation is toward

decrease and in the end of the period (2020) the industry's import share is only 0,49%. At the same time, industry "Manufacturing" is increasing its share starting with 7,92% in 2010, and forming a share of 48,07% in 2020.

**Table 4.** *Share of the import to Bulgarian industries from EU member-states (in % for the period 2010-2020)*

|  | 2010   | 2011   | 2012   | 2013   | 2014   | 2015   | 2016   | 2017   | 2018   | 2019   | 2020   |
|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Agriculture, forestry and fishing                                    | 1,19%  | 6,40%  | 6,28%  | 6,10%  | 5,66%  | 5,23%  | 5,22%  | 5,24%  | 5,07%  | 4,72%  | 4,72%  |
| Mining and quarrying   | 44,89% | 0,75%  | 0,74%  | 0,77%  | 0,76%  | 0,70%  | 0,74%  | 0,71%  | 0,67%  | 0,49%  | 0,49%  |
| Manufacturing  | 7,92%  | 45,53% | 46,66% | 47,55% | 46,33% | 46,48% | 48,59% | 49,69% | 48,39% | 48,07% | 48,07% |
| Electricity, gas, steam and air conditioning supply                  | 0,88%  | 6,89%  | 6,40%  | 6,27%  | 5,90%  | 5,68%  | 6,74%  | 6,75%  | 5,11%  | 4,68%  | 4,68%  |
| Water supply; sewerage; waste management and remediation activities  | 13,01% | 0,55%  | 0,48%  | 0,52%  | 0,58%  | 0,52%  | 0,58%  | 0,53%  | 0,49%  | 0,56%  | 0,56%  |
| Construction   | 7,81%  | 11,24% | 12,17% | 10,71% | 11,22% | 12,55% | 9,04%  | 8,19%  | 9,47%  | 10,31% | 10,31% |
| Wholesale and retail trade; repair of motor vehicles and motorcycles | 8,16%  | 7,08%  | 6,99%  | 7,05%  | 7,42%  | 7,41%  | 7,43%  | 7,58%  | 8,05%  | 8,26%  | 8,26%  |
| Transporting and storage   | 1,81%  | 7,45%  | 6,83%  | 7,21%  | 8,22%  | 7,74%  | 8,00%  | 7,33%  | 8,00%  | 7,78%  | 7,78%  |
| Accommodation and food service activities                            | 2,88%  | 1,38%  | 1,40%  | 1,39%  | 1,40%  | 1,34%  | 1,36%  | 1,50%  | 1,58%  | 1,53%  | 1,53%  |
| Information and communication  | 0,88%  | 2,79%  | 2,75%  | 2,62%  | 2,61%  | 2,70%  | 2,66%  | 2,76%  | 2,88%  | 3,20%  | 3,20%  |
| Financial and insurance activities                                   | 0,87%  | 0,74%  | 0,69%  | 0,70%  | 0,61%  | 0,61%  | 0,68%  | 0,68%  | 0,71%  | 0,64%  | 0,64%  |
| Real estate activities   | 2,52%  | 0,76%  | 0,71%  | 0,74%  | 0,69%  | 0,61%  | 0,62%  | 0,73%  | 0,75%  | 0,69%  | 0,69%  |
| Professional, scientific and technical activities                    | 1,49%  | 2,33%  | 2,33%  | 2,45%  | 2,34%  | 2,42%  | 2,31%  | 2,26%  | 2,23%  | 2,41%  | 2,41%  |
| Administrative and support service activities                        | 1,44%  | 1,26%  | 1,21%  | 1,18%  | 1,34%  | 1,33%  | 1,38%  | 1,32%  | 1,47%  | 1,51%  | 1,51%  |
| Public administration and defense; compulsory social security        | 0,47%  | 1,22%  | 1,07%  | 1,13%  | 1,14%  | 1,05%  | 0,98%  | 0,94%  | 1,11%  | 1,11%  | 1,11%  |
| Education  | 2,54%  | 0,37%  | 0,33%  | 0,34%  | 0,36%  | 0,36%  | 0,31%  | 0,33%  | 0,35%  | 0,36%  | 0,36%  |
| Human health and social work activities                              | 0,97%  | 2,41%  | 2,15%  | 2,39%  | 2,29%  | 2,16%  | 2,23%  | 2,32%  | 2,48%  | 2,40%  | 2,40%  |
| Arts, entertainment and recreation                                   | 0,25%  | 0,69%  | 0,64%  | 0,70%  | 0,87%  | 0,89%  | 0,90%  | 0,93%  | 0,95%  | 1,03%  | 1,03%  |
| Other services activities  | 0,02%  | 0,18%  | 0,17%  | 0,17%  | 0,26%  | 0,23%  | 0,23%  | 0,22%  | 0,24%  | 0,25%  | 0,25%  |

*Source: Author's calculations*

## CONCLUSION

The presented study is part of a larger one, that is dedicated to defining the complex relations between Bulgarian economic system and the economics of the



EU member-states. The analysis of the major trade relations shows that the import relations are more intensive and flexible than the export once. Interesting conclusion that can be made is that Bulgaria is mainly exporter of products related to the material production industries rather than the services. At the same time, the economy is dependent on import of good related to the same material production industries. When analyzing geographically the export and import, the following conclusions can be stated. The export from Bulgaria is not so strongly located to the Balkan peninsular, while the import relations are primary with countries that are Bulgarian neighbors.

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# DECODING THE FOUNDATIONS FOR BULGARIA'S ECONOMIC FUTURE

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## ABSTRACT

The development of the Bulgarian economy in the last two decades is conditionally divided into two significant periods - before the accession (2000-2007) and after the accession (2008-2020) of the country to the integration community of the European Union. The study of the results of this development can be characterized by multiple indicators, as well as by the position of its various aspects. The current research focuses on identifying the priority (strategic) industries that become a generator of economic success in Bulgaria. The research methodology builds on the information provided by the input-output model. The obtained results highlight those priority industries that have the strongest impact on Bulgaria's economic performance.

**Keywords:** *priority industries, input-output model, Bulgarian economy, economic future*

## PRELUDE TO THE ANALYSIS

Economic theory and practice can boast a rich set of models for studying the past economic development of a system (be it national, regional and/or firm). Each of these models, based on the relevant assumptions and applied in the relevant conditions, is a carrier of static information, registering events, phenomena and processes in the past period of time, and in the best case, manages to deduce the results (consequences) of these events, phenomena and processes. The results obtained in carrying out this type of research and analysis are, of course, important not only to evaluate the effectiveness of past decisions, but also in the context of the decision-making process for the future operation of these systems. This issue, considered in the context of a constantly changing global socio-economic environment, in addition to the intensively occurring transition to a digital age, complicates and changes the challenges that must be faced by the management of systems at all levels. And this change brings even more tangibly to the fore the need for an adequate strategic planning process aimed at identifying the necessary goals of future development.

Narrowing the research view, limiting it within the limits of the Bulgarian economy, an impression is made by the rich set of national strategic documents (as of August 2023, there are 169 active planning documents [1], developed to ensure the effective functioning of the socio-economic system of Bulgaria in the various aspects that this functioning and development can cover. The review of

the most important strategic document - the National Development Program of Bulgaria 2030 - was also the catalyst for the implementation of the present study. And more specifically: the stated goal of achieving an accelerated economic development and specific priorities for individual economic industries, without an in-depth analysis to identify the priority industries for the Bulgarian economy. It is the implementation of this analysis that is the main goal of the present development, which in turn identifies the economic system of Bulgaria as an object of the study, and the efficiency with which individual industries function - as the subject of the study. Based on the analysis carried out, not only the priority industries for the economic system are derived, but also the impact on the economy that the process of joining the European Union has can be assessed.

## **MAPPING THE ACADEMIC TERRAIN**

The focus of each administration is the achievement of economic growth, which will be used as a basis for the achievement of the other goals of sustainable development (in the social and environmental fields). Although a term that is used daily by both professional economists and the general public, the essence and content behind the words "economic growth" are rarely questioned. The first definitions, which we find in Smith [2], Ricardo [3], and then in Solow [4] and Kuznets [5], show economic growth as directly related to an increase in public welfare .

On a separate plane, economic growth is considered not only as a factor for achieving public welfare, but also as a generator for future development of the economic system. It is about the real production activities that promote economic growth, ensuring the continuous improvement of production methods and the discovery of new resources in order to create conditions for their efficient use. This also brings forward the study of the relationships that exist between industries in an economic system, both from their position as creators of resources and users of resources for intermediate consumption. Leontief [6] and Hirschman [7] explored these connections between economic industries, as well as their role in shaping the structure of the economy.

The strong dependence between industries in the economic system implies the need for an adequate approach to their management as a whole and individually. This approach should be a reflection of the idea of achieving efficient and competitive functioning of the economy, based on well-functioning industries whose interconnections are not disturbed. In addition, the strategic management of national economic systems today implies that it is not possible to evaluate all industries with the same level of importance for the development of the economy. In this context, the need to evaluate and highlight those industries that are a priority for the economic system comes to the fore, without underestimating the need for an adequate management approach to the other industries as well.

Carrying out an analysis that leads to results that allow the priority industries for an economic system to be identified is key when it comes to developing strategic development documents. The output of the key (priority) industries for an economy not only increase the efficiency of its functioning, but also strengthen its competitiveness levels. In this way, there is not only a guarantee of the sustainable development of the system, but also an improvement of its performance, comparing it with other economic systems. This once again confirms the need for an adequate approach in prioritizing economic industries and planning specific actions for their stimulation and development.

Due to the nature of the present study, it is based on the use of the input-output model developed by Vasilii Leontief [6] and specifically the forward and reverse relationships between economic industries that can be studied and evaluated through it. Symmetric input-output tables represent economic industries in rows and columns, showing how they (industries) interact. The vector columns of the table characterize the inputs of the various resources required for production in each of the respective industries  $j$  ( $j = 1, 2, \dots, n$ ). The sum of the column vector values represents the material costs of industry  $j$  to create its total output. The vector rows in the table characterize the resources created in industry  $i$  ( $i = 1, 2, \dots, n$ ) made available for use by all other industries in the economy. The vector-row sum represents the volume of inputs supplied by each economy  $i$ .

In this model, the relationships between industries in an economy are forward and backward linkages. Straight connections characterize the strength of sensitivity, i.e. the extent to which an industry contributes to the development and functioning of other industries, including itself. In this way, the degree of sensitivity of an industry as a result of the demand for its intermediate output from other industries in the economy is estimated. Higher values in the assessment of direct links are indicative of the industry's ability to provide a resource for the functioning of other industries.

Feedbacks, in turn, characterize the so-called distribution of power, which characterizes the interrelationship of an industry with the others that provide it with output, so that it can function smoothly in the future. In other words, the strength of feedback loops is a measure of the level of demand for output from economic industries, thus becoming generators for the production processes in those industries. Higher values of the indicator also characterize higher levels of dependence between the studied industries.

Based on these two types of linkages, priority industries for an economy could be derived. Essentially, for the first time, priority industries were the subject of interest by Hirschman [7], who focused on the analysis of the high linkages of industries that are a source of growth for the economic system. The perception of the role of high-value relationships is similar to that of Jones [8], according to whom the relevant industry creates added value not only in itself, but also distributes it to other industries.

The advantages of the input-output model are indisputable, not only for studying past development, but above all for designing future development. The use of this model, when talking about deriving priority industries for an economic system, is also related to taking into account the main limitations presented in the scientific research carried out to date. They derive from the technological coefficients of the matrix of direct costs, which are the basis of the constructed research methodology. Bullard and Sebald point out as the main problem with the use of the technological coefficients  $a_{ij}$  and the coefficients of the total costs derived on their basis  $\frac{A_{ij}}{\Delta}$  in the inverse matrix  $(E - A)^{-1}$ , the lack of constancy over time, and in conditions of constant technological change, they may not reflect fully faithfully and comprehensively the real material and technological conditions under which economic industries function [9], [10]. Similar considerations are also presented in the works of Quandt [11], Simonovitz [12] and Lahiri [13]. However, these considerations do not have such a strong impact today, as economic industries manage to adapt to changes much faster than in the past.

## ANALYTICAL FRAMEWORK

To apply the capabilities of the input-output model, the information provided by the symmetrical input-output tables for Bulgaria in the period 2000-2009 and the FIGARO tables for the period 2010-2020 is used. The data used up to 2009 present information on 64 branches of the Bulgarian economy, which gives rise to the need for their aggregation to 19 industries in order to be comparable with the data from the FIGARO tables. The technical aspect of the aggregation process, in which the transition from 64 to 19 industrial structure in the Bulgarian economy takes place, is presented by Kalinkova [14]. Worldwide, similar but much larger aggregations of up to 27 industries were made by Chenery-Watanabe [15] with input-output data for the industries of Japan (1951, 182 x 182), Norway (1950, 117 x 117) and USA (1947, 200 x 200).

For the purposes of the study, the open input-output model constructed by  $n$  industries (in the present study 19) is applied, where the equations are valid:

$$(E - A).X = Y \quad (1)$$

$$(E - A)^{-1}.Y = X \quad (2)$$

where:

$X$  is a vector with dimension  $n \times 1$  and characterizes the output for the different industries  $j$  in the economy ( $j = 1, 2, \dots, n$ ). In essence, it is the vector of the total output created in the economy and, in this sense, it is also the vector by which its structure is characterized.

$Y$  is a vector with dimension  $n \times 1$  and characterizes the final demand for output created in the industries of the national economy.

$(E - A)$  is the matrix of technological coefficients with dimension  $n \times n$ .

$(E - A)^{-1}$  is the inverse matrix of technological coefficients with dimension  $n \times n$ .

Each equation represents a different approach to the management of the economic system, respectively helps to generate a different type of information for the future development of this system. At the same time, the two management logics provide an opportunity to study the consequences for the economic system of the priority development of its specific industries. They make it possible to evaluate the consequences for the economic system, from changes in its structure ( $X$ ) and from changes in the vector characterizing the consumption of final products ( $Y$ ).

A key element in bringing out the industries with the so-called high connections, is the use of the technological coefficients  $a_{ij}$  presented above. They characterize the direct cost of a resource of type  $i$  required to produce a unit of output of type  $j$ .

$$a_{ij} = \frac{\sum_i^j x_{ij}}{x_j} \quad (i=j= 1, 2, \dots, n) \quad (3)$$

These coefficients, as well as the coefficients of total costs calculated on their basis (the coefficients of the inverse matrix) are used to calculate the direct and inverse relationships that give an answer to the questions "Where does the output created by the industries in the economy go?" and "From where does the output necessary for the functioning of the industries in the economy come in?". The study of these connections in order to identify the priority industries for the economic system can be carried out in different ways.

The most commonly used method for calculating forward and backward linkages is that of Chenery-Watanabe, who first used the interdependencies between industries as a starting point to study the structure of the economy [15].

Direct links are calculated as the vector-order sum of the coefficients of direct costs of output of industry  $i$  for the production of the output of this same industry  $i$ , as well as of all other industries  $j$  ( $j = 1, 2, \dots, n$ ). The formula for their calculation has the following form:

$$FLcw_i = \sum_{j=1}^n \frac{X_{ij}}{X_i} = \sum_{j=1}^n a_{ij} \quad (4)$$

The feedbacks are calculated as a column-vector sum of the coefficients of the matrix  $A$ , which characterize what resources of industry  $i$  are needed to produce the output of industry  $j$  ( $i = j = 1, 2, \dots, n$ ). The formula for their calculation is as follows.

$$BLcw_j = \sum_{i=1}^n \frac{X_{ij}}{X_i} = \sum_{i=1}^n a_{ij} \quad (5)$$

The interpretation of the obtained results is made under the assumption that the industries in the economy do not have specific weights, i.e. are of equal importance for the development of the economy. Based on this assumption, priority industries in the economy are considered to be those characterized by values of the studied connections greater than 1 [16].

A step in improving the applied method is done by placing "weights" (degrees of importance) of individual industries. In this way, more precise coefficients are obtained by which to assess the degree of importance of the industry for the economy. For this purpose, the predetermined weights are used, so the mathematical form of equations (4) and (5) is modified respectively equations (6) and (7)), converting the links from unweighted into weighted. And the industries for which the sum of the values of the two coefficients is greater than 1 are considered priority.

$$wFLcw_i = \frac{FLcw_i}{\left(\frac{1}{n}\right) \sum_{i=1}^n FLcw_i} * w \quad (6)$$

$$wBLcw_j = \frac{BLcw_j}{\left(\frac{1}{n}\right) \sum_{j=1}^n BLcw_j} * w \quad (7)$$

where:

$wFLcw_i$  – weighted forward linkages calculated using the Chenery-Watanabe method;

$wBLcw_j$  – weighted backward linkages calculated using the Chenery-Watanabe method;

Using the Chenery-Watanabe method makes it possible to assess strategic (priority) industries for an economy based on the direct relationships that exist between industries. A disadvantage of the method is its inability to cover the indirect relationships that exist between the industries that fall within the scope of the coefficients of the full costs presented in the inverse matrix  $(E-A)^{-1}$ .

For this reason, the next stage of the research methodology is related to the use of Rasmussen's method, in which the forward and reverse connections

between industries in the economic system are evaluated based on the information provided by the inverse matrix of Leontiev.

$$FL_i^R = \sum_{j=1}^n \frac{A_{ij}}{\Delta} \quad (8)$$

$$BL_j^R = \sum_{i=1}^n \frac{A_{ij}}{\Delta} \quad (9)$$

Bringing the priority industries through their full operating conditions (full costs) makes it possible to estimate much more precisely the impact that an increase in output in one priority industry will have on other industries (change in demand for resources) and the economic system as a whole (changes in added value, in total output and output intended for final consumption).

$$wFL_i^R = \frac{FL_i^R}{\left(\frac{1}{n}\right) \sum_{i=1}^n FL_i^R} \cdot w \quad (10)$$

$$wBL_j^R = \frac{BL_j^R}{\left(\frac{1}{n}\right) \sum_{j=1}^n BL_j^R} \cdot w \quad (11)$$

where:

$$IP = \frac{FL_i^R}{\left(\frac{1}{n}\right) \sum_{i=1}^n FL_i^R} \cdot w + \frac{BL_j^R}{\left(\frac{1}{n}\right) \sum_{j=1}^n BL_j^R} \cdot w \quad (12)$$

The derived methodology makes it possible to carry out four assessments of the importance of the branches of the Bulgarian economy for its future development. The results of the research are presented in the following statement.

## FINDINGS AND INTERPRETATION

The following presentation presents the results of the analysis on the importance of industries in the Bulgarian economy in the two studied periods by applying Chenery-Watanabe method and Rasmussen method.

Priority industries assessed using the weighted Chenery-Watanabe method

During the first studied period (2000-2007), as can be seen from the data presented in Table 1, seven main priority industries functioned in the Bulgarian economy. In 2000, the industry with the highest value of the Chenery-Watanabe coefficient is "Manufacturing" [4,21], and with the lowest priority is "Wholesale and retail trade; repair of motor vehicles and motorcycles" [1,08]. The priority nature of the "Manufacturing" industry is preserved in all years of the researched



period, with only a decrease in the value characterizing this priority [3.29 in 2007] being reported. Industry "Wholesale and retail trade; repair of motor vehicles and motorcycles" is characterized by a fluctuating performance according to the studied indicator with years of decline below the reference value 1 (2002, 2004, 2005 and 2007). Since 2001, the "Information and communication" industry has been shown as a priority, and this trend is maintained until the end of the period, when a value of 1.07 is noted.

The remaining priority industries for the Bulgarian economy during this period are: "Agriculture, forestry and fishing" [1.17-2000 and 1.27-2007]; "Electricity, gas, steam and air conditioning supply" [1.40-2000 and 1.09-2007]; "Construction" [1.30-2000 and 1.72-2007]; "Transporting and storage" [1.71-2000 and 2.31-2007], and "Real estate activities" [1.26-2000 and 1.78-2007].

**Table 1.** Priority industries in Bulgarian economy for the period 2000-2007 measured by Chenery-Watanabe method

|  | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|--|------|------|------|------|------|------|------|------|
| Agriculture, forestry and fishing                                    | 1,17 | 1,45 | 1,38 | 1,5  | 1,14 | 1,48 | 2,41 | 1,27 |
| Mining and quarrying   | 0,68 | 0,62 | 0,68 | 0,66 | 0,68 | 0,54 | 0,71 | 0,53 |
| Manufacturing  | 4,21 | 2,6  | 2,93 | 2,75 | 3,11 | 3,68 | 4,01 | 3,29 |
| Electricity, gas, steam and air conditioning supply                  | 1,4  | 1,72 | 1,46 | 1,45 | 1,38 | 1,15 | 0,82 | 1,09 |
| Water supply; sewerage; waste management and remediation activities  | 0,77 | 0,82 | 0,87 | 0,81 | 0,83 | 0,77 | 0,59 | 0,8  |
| Construction   | 1,3  | 1,54 | 1,44 | 1,43 | 1,56 | 1,52 | 1,59 | 1,72 |
| Wholesale and retail trade; repair of motor vehicles and motorcycles | 1,08 | 1,24 | 0,94 | 1,17 | 0,49 | 0,87 | 2,29 | 0,21 |
| Transporting and storage   | 1,71 | 1,73 | 1,72 | 1,94 | 1,74 | 1,59 | 2,05 | 2,31 |
| Accommodation and food service activities                            | 0,54 | 0,56 | 0,56 | 0,51 | 0,55 | 0,6  | 0,27 | 0,67 |
| Information and communication  | 0,93 | 1,19 | 1,09 | 1,07 | 1,22 | 1,03 | 0,8  | 1,07 |
| Financial and insurance activities                                   | 0,42 | 0,9  | 0,74 | 0,72 | 0,89 | 0,62 | 0,39 | 0,68 |
| Real estate activities   | 1,26 | 1,13 | 1,55 | 1,32 | 1,54 | 1,77 | 1,07 | 1,78 |
| Professional, scientific and technical activities                    | 0,49 | 0,46 | 0,56 | 0,53 | 0,67 | 0,52 | 0,15 | 0,57 |
| Administrative and support service activities                        | 0,79 | 0,92 | 0,89 | 0,8  | 0,78 | 0,69 | 0,61 | 0,68 |
| Public administration and defense; compulsory social security        | 0,29 | 0,3  | 0,3  | 0,3  | 0,33 | 0,27 | 0,15 | 0,27 |
| Education  | 0,61 | 0,58 | 0,56 | 0,52 | 0,56 | 0,52 | 0,29 | 0,51 |
| Human health and social work activities                              | 0,81 | 0,71 | 0,79 | 0,87 | 0,9  | 0,82 | 0,66 | 0,91 |
| Arts, entertainment and recreation                                   | 0,54 | 0,53 | 0,54 | 0,65 | 0,64 | 0,56 | 0,17 | 0,63 |
| Other services activities  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |

*Source: Author's calculations*

During the second period considered in the present study, an increase in the number of priority industries for the Bulgarian economy is reported (see Table 2). In the first year of Bulgaria's accession to the EU integration community (2008), the number of priority industries in the country's economy remained identical to that of the previous period - seven. The highest values in the studied indicator are again reported for the "Manufacturing" industry [3.79] and this trend is

maintained until the end of the studied period (2020). In addition to the already established priority industries, "Wholesale and retail trade; repair of motor vehicles and motorcycles"; "Financial and insurance activities", "Professional, scientific and technical activities" and "Arts, entertainment and recreation", and the "Real estate activities" industry lost its priority character in 2010.

**Table 2.** *Priority industries in Bulgarian economy for the period 2008-2020 measured by Chenery-Watanabe method*

|  | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|--|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Agriculture, forestry and fishing                                    | 1,48 | 0,9  | 1,1  | 1,06 | 1,04 | 1,06 | 1,04 | 1    | 1,01 | 1    | 1,01 | 0,99 | 1,06 |
| Mining and quarrying   | 0,81 | 0,92 | 0,73 | 0,7  | 0,7  | 0,7  | 0,66 | 0,65 | 0,65 | 0,65 | 0,62 | 0,58 | 0,59 |
| Manufacturing  | 3,79 | 1,94 | 2,2  | 2,19 | 2,25 | 2,25 | 2,15 | 2,09 | 2,12 | 2,11 | 2,07 | 2,06 | 2    |
| Electricity, gas, steam and air conditioning supply                  | 1,35 | 1,53 | 1,06 | 1,09 | 1,09 | 1,11 | 0,94 | 0,92 | 0,96 | 0,92 | 0,82 | 0,77 | 0,77 |
| Water supply; sewerage; waste management and remediation activities  | 0,57 | 0,89 | 0,69 | 0,69 | 0,7  | 0,69 | 0,69 | 0,69 | 0,68 | 0,67 | 0,66 | 0,67 | 0,68 |
| Construction   | 1,73 | 1,37 | 1,57 | 1,56 | 1,58 | 1,42 | 1,58 | 1,72 | 1,41 | 1,48 | 1,51 | 1,53 | 1,8  |
| Wholesale and retail trade; repair of motor vehicles and motorcycles | 0,1  | 0,21 | 1,34 | 1,34 | 1,31 | 1,31 | 1,38 | 1,37 | 1,4  | 1,41 | 1,43 | 1,44 | 1,45 |
| Transporting and storage   | 1,44 | 1,73 | 1,31 | 1,35 | 1,36 | 1,37 | 1,39 | 1,34 | 1,38 | 1,35 | 1,36 | 1,36 | 1,3  |
| Accommodation and food service activities                            | 0,61 | 1,1  | 0,67 | 0,69 | 0,69 | 0,69 | 0,7  | 0,7  | 0,7  | 0,7  | 0,71 | 0,7  | 0,65 |
| Information and communication  | 1,04 | 1,15 | 1,06 | 1,07 | 1,07 | 1,1  | 1,08 | 1,1  | 1,15 | 1,13 | 1,18 | 1,25 | 1,33 |
| Financial and insurance activities                                   | 0,6  | 0,86 | 1,39 | 1,39 | 1,38 | 1,4  | 1,35 | 1,34 | 1,49 | 1,45 | 1,47 | 1,45 | 1,4  |
| Real estate activities   | 1,4  | 1,42 | 0,7  | 0,72 | 0,7  | 0,72 | 0,71 | 0,7  | 0,69 | 0,73 | 0,75 | 0,7  | 0,69 |
| Professional, scientific and technical activities                    | 1,26 | 1,02 | 1,4  | 1,36 | 1,34 | 1,32 | 1,31 | 1,39 | 1,44 | 1,41 | 1,41 | 1,46 | 1,45 |
| Administrative and support service activities                        | 0,59 | 0,8  | 0,91 | 0,92 | 0,92 | 0,92 | 0,94 | 0,94 | 0,96 | 0,96 | 0,98 | 0,99 | 0,95 |
| Public administration and defense; compulsory social security        | 0,39 | 0,29 | 0,41 | 0,43 | 0,46 | 0,46 | 0,47 | 0,45 | 0,42 | 0,43 | 0,44 | 0,43 | 0,44 |
| Education  | 0,62 | 0,76 | 0,46 | 0,47 | 0,48 | 0,48 | 0,5  | 0,47 | 0,42 | 0,44 | 0,44 | 0,44 | 0,44 |
| Human health and social work activities                              | 0,83 | 1,35 | 0,68 | 0,7  | 0,69 | 0,71 | 0,72 | 0,71 | 0,69 | 0,69 | 0,7  | 0,68 | 0,73 |
| Arts, entertainment and recreation                                   | 0,38 | 0,74 | 1,3  | 1,27 | 1,23 | 1,29 | 1,39 | 1,42 | 1,44 | 1,46 | 1,45 | 1,51 | 1,23 |
| Other services activities  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |

*Source: Author's calculations*

### Priority industries assessed using the weighted Rasmussen method

Research on priority industries in the Bulgarian economy using the Chenery-Watanabe method provides the most basic insight into their impact on the development of the economic system. A deep insight is provided by the results obtained by applying Rasmussen's method.

The data presented in Table No. 3 clearly show that, evaluated through the matrix of full costs (E-A)-1, the number of priority industries in the Bulgarian economy is decreasing. Changes are also reported in the ranking of industries. In the years between 2000 and 2004, the industry with the highest value of the coefficient, measured by the Rasmussen method, is "Wholesale and retail trade; repair of motor vehicles and motorcycles" with a value of 4.96 in 2000 and 4.64 in 2004. Subsequently, the value decreased and as the highest priority in 2005 according to this indicator the industry "Manufacturing" was reported [2.66] and until the end of the researched period (2007) remains the industry with the highest value of the indicator [2.62].

It is noteworthy that at the beginning of the studied period, which characterizes the development of Bulgaria before its accession to the European Union, the number of priority industries for the country was four: "Agriculture, forestry and fishing"; "Manufacturing"; "Wholesale and retail trade; repair of motor vehicles and motorcycles" and "Transporting and storage". At the end of the research period (2007), the number of priority industries in the Bulgarian economy reached six, with "Construction" and "Real estate activities" added to the already mentioned ones.

**Table 3.** *Priority industries in Bulgarian economy for the period 2000-2007 measured by Rasmussen method*

|  | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|--|------|------|------|------|------|------|------|------|
| Agriculture, forestry and fishing                                    | 1,4  | 1,4  | 1,33 | 1,2  | 1,23 | 1,09 | 1,1  | 1,03 |
| Mining and quarrying   | 0,73 | 0,93 | 0,7  | 0,73 | 0,7  | 0,81 | 0,98 | 0,81 |
| Manufacturing  | 2,84 | 2,65 | 2,67 | 2,76 | 2,78 | 2,66 | 1,19 | 2,62 |
| Electricity, gas, steam and air conditioning supply                  | 0,77 | 0,73 | 0,76 | 0,82 | 0,72 | 0,86 | 0,99 | 0,86 |
| Water supply; sewerage; waste management and remediation activities  | 0,54 | 0,49 | 0,58 | 0,6  | 0,55 | 0,75 | 0,97 | 0,8  |
| Construction   | 0,7  | 0,65 | 0,74 | 0,8  | 0,79 | 1,05 | 1,04 | 1,22 |
| Wholesale and retail trade; repair of motor vehicles and motorcycles | 4,96 | 5,43 | 4,74 | 4,29 | 4,64 | 2,57 | 1,08 | 1,92 |
| Transporting and storage   | 1,48 | 1,56 | 1,6  | 1,53 | 1,6  | 1,47 | 1,06 | 1,47 |
| Accommodation and food service activities                            | 0,42 | 0,38 | 0,45 | 0,48 | 0,44 | 0,67 | 0,95 | 0,73 |
| Information and communication  | 0,65 | 0,6  | 0,68 | 0,72 | 0,72 | 0,87 | 0,99 | 0,92 |
| Financial and insurance activities                                   | 0,59 | 0,47 | 0,52 | 0,55 | 0,55 | 0,67 | 0,96 | 0,74 |
| Real estate activities   | 0,88 | 0,96 | 1,03 | 1,04 | 1,03 | 1,15 | 1    | 1,22 |
| Professional, scientific and technical activities                    | 0,55 | 0,55 | 0,56 | 0,59 | 0,61 | 0,69 | 0,95 | 0,72 |
| Administrative and support service activities                        | 0,54 | 0,47 | 0,55 | 0,57 | 0,51 | 0,69 | 0,97 | 0,72 |
| Public administration and defense; compulsory social security        | 0,36 | 0,32 | 0,38 | 0,42 | 0,38 | 0,54 | 0,95 | 0,57 |
| Education  | 0,42 | 0,37 | 0,44 | 0,47 | 0,43 | 0,62 | 0,95 | 0,65 |
| Human health and social work activities                              | 0,47 | 0,4  | 0,5  | 0,58 | 0,53 | 0,74 | 0,98 | 0,82 |
| Arts, entertainment and recreation                                   | 0,42 | 0,37 | 0,44 | 0,52 | 0,46 | 0,65 | 0,95 | 0,72 |
| Other services activities  | 0,29 | 0,26 | 0,31 | 0,34 | 0,31 | 0,45 | 0,94 | 0,47 |

*Source: Author's calculations*

The Rasmussen method applied to the second analyzed period (2008-2020) characterizes the development and effectiveness of the functioning of the Bulgarian economy based on the information provided from the full cost matrix. The data presented in Table No. 4 confirm the established trend of increasing the number of priority industries in the Bulgarian economy. In the first year after Bulgaria joined the integration community of the European Union (2008), the number of priority industries decreased by one. The "Real estate activities" industry loses its priority character and this state is maintained until the end of the researched period (2020).

**Table 4.** Priority industries in Bulgarian economy for the period 2008-2020 measured by Rasmussen method

|  | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|--|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Agriculture, forestry and fishing                                    | 1,48 | 0,9  | 1,1  | 1,06 | 1,04 | 1,06 | 1,04 | 1    | 1,01 | 1    | 1,01 | 0,99 | 1,06 |
| Mining and quarrying   | 0,81 | 0,92 | 0,73 | 0,7  | 0,7  | 0,7  | 0,66 | 0,65 | 0,65 | 0,65 | 0,62 | 0,58 | 0,59 |
| Manufacturing  | 3,79 | 1,94 | 2,2  | 2,19 | 2,25 | 2,25 | 2,15 | 2,09 | 2,12 | 2,11 | 2,07 | 2,06 | 2    |
| Electricity, gas, steam and air conditioning supply                  | 1,35 | 1,53 | 1,06 | 1,09 | 1,09 | 1,11 | 0,94 | 0,92 | 0,96 | 0,92 | 0,82 | 0,77 | 0,77 |
| Water supply; sewerage; waste management and remediation activities  | 0,57 | 0,89 | 0,69 | 0,69 | 0,7  | 0,69 | 0,69 | 0,69 | 0,68 | 0,67 | 0,66 | 0,67 | 0,68 |
| Construction   | 1,73 | 1,37 | 1,57 | 1,56 | 1,58 | 1,42 | 1,58 | 1,72 | 1,41 | 1,48 | 1,51 | 1,53 | 1,8  |
| Wholesale and retail trade; repair of motor vehicles and motorcycles | 0,1  | 0,21 | 1,34 | 1,34 | 1,31 | 1,31 | 1,38 | 1,37 | 1,4  | 1,41 | 1,43 | 1,44 | 1,45 |
| Transporting and storage   | 1,44 | 1,73 | 1,31 | 1,35 | 1,36 | 1,37 | 1,39 | 1,34 | 1,38 | 1,35 | 1,36 | 1,36 | 1,3  |
| Accommodation and food service activities                            | 0,61 | 1,1  | 0,67 | 0,69 | 0,69 | 0,69 | 0,7  | 0,7  | 0,7  | 0,7  | 0,71 | 0,7  | 0,65 |
| Information and communication  | 1,04 | 1,15 | 1,06 | 1,07 | 1,07 | 1,1  | 1,08 | 1,1  | 1,15 | 1,13 | 1,18 | 1,25 | 1,33 |
| Financial and insurance activities                                   | 0,6  | 0,86 | 1,39 | 1,39 | 1,38 | 1,4  | 1,35 | 1,34 | 1,49 | 1,45 | 1,47 | 1,45 | 1,4  |
| Real estate activities   | 1,4  | 1,42 | 0,7  | 0,72 | 0,7  | 0,72 | 0,71 | 0,7  | 0,69 | 0,73 | 0,75 | 0,7  | 0,69 |
| Professional, scientific and technical activities                    | 1,26 | 1,02 | 1,4  | 1,36 | 1,34 | 1,32 | 1,31 | 1,39 | 1,44 | 1,41 | 1,41 | 1,46 | 1,45 |
| Administrative and support service activities                        | 0,59 | 0,8  | 0,91 | 0,92 | 0,92 | 0,92 | 0,94 | 0,94 | 0,96 | 0,96 | 0,98 | 0,99 | 0,95 |
| Public administration and defense; compulsory social security        | 0,39 | 0,29 | 0,41 | 0,43 | 0,46 | 0,46 | 0,47 | 0,45 | 0,42 | 0,43 | 0,44 | 0,43 | 0,44 |
| Education  | 0,62 | 0,76 | 0,46 | 0,47 | 0,48 | 0,48 | 0,5  | 0,47 | 0,42 | 0,44 | 0,44 | 0,44 | 0,44 |
| Human health and social work activities                              | 0,83 | 1,35 | 0,68 | 0,7  | 0,69 | 0,71 | 0,72 | 0,71 | 0,69 | 0,69 | 0,7  | 0,68 | 0,73 |
| Arts, entertainment and recreation                                   | 0,38 | 0,74 | 1,3  | 1,27 | 1,23 | 1,29 | 1,39 | 1,42 | 1,44 | 1,46 | 1,45 | 1,51 | 1,23 |
| Other services activities  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |

*Source:* Author's calculations

The "Agriculture, forestry and fishing" industry is also characterized by fluctuations, where in certain years the value of the indicator falls below the limit value of 1, which leads to the classification of the industry as a low priority for the country's economy. At the end of the studied period, there were nine active priority industries for the Bulgarian economy, presented in Table No. 4.

In addition to the already outlined industry the results show that as a strategic (priority) economic industries can be defined as well: "Information and communication"; "Financial and insurance activities"; "Professional, scientific and technical activities" and "Art, entertainment and recreation". With highest priority the method characterized "Manufacturing" industry.

## CONCLUSION

The presented analysis of the importance of industries in the economic system of Bulgaria should be considered as the first step in the process of deriving the necessary and desired future development of the economic system. It is not by chance that the results presented here are set as the basis for further work. The highlighted priority industries for the Bulgarian economy show the transition from a focus on creating products of a material nature to the provision of services. At the same time, the constant presence of industries such as "Agriculture, forestry and fishing" and "Manufacturing" categorically show that it is not possible to achieve successful development in the future if management decisions are made partially, without considering the systemic nature of the economic system.

For this reason, the author also marks the necessary future research that must be carried out in order to obtain sufficiently wide-ranging and in-depth information, on the basis of which the priorities of the economic development of Bulgaria can be derived. First, it is necessary to continue the research in the line of determining the priority industries for the Bulgarian economy by applying the possibilities of the matrix of full costs, which are not presented in the present study. Secondly, it is necessary to carry out a sensitivity analysis, which would provide detailed information on how targeted changes in a given industry of the economy would affect the overall development of Bulgaria's economic system.

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# EUROPEAN BANK FOR RECONSTRUCTION AND DEVELOPMENT'S ACTIVITIES IN RESPONSE TO THE ECONOMIC CRISIS CAUSED BY THE COVID-19 PANDEMIC

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## ABSTRACT

This paper is devoted to the European Bank for Reconstruction and Development's measures for limiting the negative impact of the coronavirus pandemic on the economies of its countries of operations. The Bank's support for the private sector recovery has been studied. The increase in the European Bank for Reconstruction and Development's investments and its advisory and policy support in response to the coronavirus crisis have been analyzed. The Bank's short-term initiatives in support of SMEs through the period of economic crisis caused by Covid-19 have been presented. The European Bank for Reconstruction and Development's activities under the Solidarity package have been analyzed assessing the effectiveness of its response to the COVID-19 crisis. The EBRD policy comparator has been explained. The state credit guarantee schemes applied in the European Bank for Reconstruction and Development countries of operations have been clarified. Conclusions from the analysis of the results of the actions taken by the European Bank for Reconstruction and Development in response to the economic crisis caused by the COVID-19 pandemic have been drawn.

**Keywords:** *European Bank for Reconstruction and Development, private sector, Covid-19 crisis, Trade Facilitation Programme*

## INTRODUCTION

The coronavirus pandemic has had a major impact on economies of the countries where the European Bank for Reconstruction and Development (EBRD) works, posing enormous challenges for policymakers across all EBRD regions [14]. The Covid-19 pandemic has reduced the funding of many firms, especially SMEs [8].

The main objective of this paper is to examine the measures taken by the EBRD for limiting the negative effects of the COVID-19 pandemic on the economies of its countries of operations.



## **THE EBRD MEASURES FOR LIMITING THE NEGATIVE IMPACT OF THE COVID-19 PANDEMIC**

With its mandate to develop and foster the private sector in the 38 economies on three continents where it currently operates, the EBRD is uniquely placed to support the effort to recovery from the pandemic and build back better economies by:

- supporting the private sector's recovery and market-friendly policy reforms;
- investing in a green and just transition of the EBRD economies;
- promoting equal opportunities, especially access to skills and employment, finance and entrepreneurship for women and youth;
- supporting countries and companies to accelerate digitalisation.

The EBRD responded swiftly to the coronavirus crisis and increased its investments to a record €11 billion in 2020 along the remit defined by its mandate [11].

The Bank's shareholders approved response and recovery measures that significantly enhanced the EBRD original Solidarity Package [10]. The EBRD was the first international financial institution to approve a comprehensive series of response and recovery measures in its Solidarity Package, first unveiled on 13 March 2020 [7]. It has focused on supporting existing clients with the provision of short-term liquidity and working capital to protect viable companies and safeguard progress towards sustainable, fair and open market economies in its countries of operations [12].

The EBRD has reacted decisively to the crisis, investing at record levels within a €21 billion two-year Solidarity Package that has delivered emergency capital to firms affected by the virus, upheld the provision of vital infrastructure services and increased access to trade finance in order to keep commerce flowing [15].

The EBRD responded to the coronavirus pandemic with record investment of €11 billion in 2020 through 411 projects, addressing the urgent needs of the 38 economies where it invests. This represents a 10 % increase in annual business investment relative to 2019, when the Bank provided €10.1 billion to finance 452 projects [12]. The Bank complemented its increased financing with scaled-up policy support [15].

The provision of trade finance is vital to keep up global trade under extremely challenging circumstances. With its Trade Facilitation Programme (TFP) the EBRD is well-positioned to lend its support. Under the Trade Facilitation Programme, there were a 144 transactions worth €385.6 million in March 2020, the highest turnover ever recorded in a single month. In 2020 the EBRD has issued

424 Trade Facilitation Programme transactions for €682 million, compared with 445 transactions worth for €559 million in the same 2019 period [13].

The EBRD has joined forces with governments and bilateral and multinational donors to address urgent needs and tackle the long-term impact of the Covid-19 pandemic. The EBRD is building back better, greener economies, boosting small businesses, improving vital infrastructure and supporting policy engagement and advisory services [10].

The EBRD has proposed several financial restructuring and insolvency policy initiatives for the EBRD regions to complement the emergency financial assistance provided by national governments and the international community.

Policy initiatives are divided into three main areas:

- Immediate initiatives to support new financing and co-financing by IFIs and national banks through secured transaction and insolvency reforms that ring-fence Covid-19 and other new financing;
- Short-term initiatives to help small and medium-sized enterprises (SMEs) through the challenging period of financial and operational distress caused by Covid-19 with advisory online information platforms and digitalisation support;
- Medium to long-term initiatives to strengthen (pre)insolvency restructuring procedures and improve the efficiency of all insolvency and enforcement procedures for all stakeholders [7].

The Bank's Strategic and Capital Framework 2021-25 sets out how the EBRD is committed to preserve and accelerate transition as countries seek to build back better.

The EBRD will continue to tackle deep-rooted broader challenges and leverage new opportunities to support the transition to a green, low-carbon economy, promote equality of opportunity, accelerate the digital transition, as well as strengthen economic governance. Through all its work, the Bank is preparing its countries for the post-virus period and to safeguard everything they have achieved so far in building sustainable, fair and open market economies.

Keeping vital trade flows going, in 2020 the EBRD supported a new record of 2,090 trade finance transactions worth €3.3 billion under its Trade Facilitation Programme, involving 90 issuing and 140 confirming banks across 40 countries worldwide. Examples of transactions include the import of medicines from Spain, Turkey and Switzerland into Lebanon, Georgia and Jordan, or the export of solar power technologies from Greece to Spain and the United Kingdom.

In addition to its own funds, the EBRD also directly mobilised €1.2 billion from co-investors. The Bank continued to concentrate its support on the private sector, which accounted for 72% of total EBRD investment in 2020.

In October the Bank reaffirmed its commitment in this area with the adoption of a new five-year Strategic and Capital Framework, which aims to make the EBRD a majority green bank by 2025.

**Table 1.** EBRD annual results, 2020 and 2019, by region

| <b>Indicators</b>                            | <b>2020</b> | <b>2019</b> |
|--|-------------|-------------|
| Annual Bank Investment (€ billion)           | 11.0        | 10.09       |
| Number of projects                           | 411         | 452         |
| Annual Bank Investment by region (€ billion) |             |             |
| Central Asia                                 | 1.15        | 1.38        |
| Central Europe and the Baltic states         | 1.41        | 1.47        |
| Cyprus and Greece                            | 0.93        | 0.64        |
| Eastern Europe and the Caucasus              | 1.93        | 2.06        |
| South-eastern Europe                         | 1.76        | 1.71        |
| Southern and eastern Mediterranean           | 2.13        | 1.85        |
| Turkey                                       | 1.68        | 1.00        |

*Source: EBRD*

The EBRD stepped up its investment to address immediate needs and to create the foundations for recovery, with a focus on building back better economies in the future. As the pandemic is exacerbating inequalities, especially for women, young people and other groups, the Bank reinforced its efforts with regard to gender and economic inclusion. This work resulted in a 24% increase in inclusion projects in 2020, with a total investment volume of €4 billion, and a record number of gender activities.

In the Western Balkans, in 2020 the EBRD further increased its support for SMEs and the private sector with the provision of €729 million in loans to commercial banks for on-lending to local businesses for investments that support the recovery and strengthen their competitiveness. This includes a new Guarantee for Growth mechanism introduced in Albania, providing Raiffeisen Bank Albania with an unfunded guarantee of up to €100 million in local currency equivalent linked to the bank's local-currency sovereign bond portfolio and freeing it to increase its lending to the local economy.

The Bank's Infrastructure Project Preparation Facility advisory led to the commercial close for Sofia Airport.

The coronavirus pandemic also hit the EBRD's southern and eastern Mediterranean (SEMED) region hard. The Bank stepped up its financing in Egypt

with the provision of €784 million in liquidity lines to local banks for on-lending to businesses in 2020. In Morocco, Bank of Africa - BMCE Group became the first recipient under the Bank's Resilience Framework in April, with a €145 million financing facility.

Complementing its investments, the EBRD boosted policy engagement in 2020. Together with multilateral and private-sector partners, the Bank stepped up the activities of the Vienna Initiative, a platform for key private and public stakeholders in the financial sector of Central and South-Eastern Europe.

The coronavirus pandemic also accelerated the shift towards a more digital world and triggered changes in the way that the EBRD provides support to SMEs. The Bank made a rapid adjustment to deliver services aimed at the development of skills for small business owners, employees and consultants, using digital infrastructure. More than 15,000 business professionals in countries where the EBRD invests participated in training and business mentoring sessions that the Bank delivered online in 2020. Donor funding has been crucial for this digital transition [12].

The International Labour Organization (ILO) and the EBRD have joined forces to respond to the coronavirus crisis in the Western Balkans by assessing the impact of the crisis on the region's labour markets and employment and advising the authorities on policy actions to support workers and enterprises [3].

The two country reports finalised for North Macedonia and Montenegro have noted the significant job losses that have occurred in some sectors and the risk of further substantial cuts in the employment rate [4], [6].

Recommendations include ensuring all those who lose jobs are entitled to some unemployment benefits, and introducing measures tailored to those most at risk of exclusion [3].

EBRD has responded to the economic and financial crisis triggered by the COVID-19 pandemic, by developing a COVID-19 Resilience Framework that is designed to help their existing and new clients. An important component of the COVID-19 Resilience Framework is the environmental and social assessment skills training programme, which helps boosting local environmental and social assessment skills of the Bank's local consultants and provide useful guidance to its clients [5].

The EBRD-supported Investment Councils (ICs) are a key part of the Bank's policy response to the coronavirus pandemic. These well-established platforms for dialogue help governments to develop policy responses which are supportive of business, especially where capacity has been constrained.

From the outbreak of the crisis, Investment Councils secretariats have strengthened their efforts to facilitate the dialogue between businesses and governments. As an active participant, the EBRD has direct exposure to many national stakeholders.

Active in 12 EBRD countries of operations these councils aim to provide a platform for public-private sector dialogue between the government, the private sector, as well as the donor community. The goal is to contribute to a positive business environment by supporting the implementation of agreed policies. Effective dialogue between the government and the private sector – facilitated by Investment Councils – is important under normal circumstances, but has proven crucial in supporting governments during and after Covid-19.

In order to ensure the continuation of the public-private dialogue during the pandemic, the EBRD Governance and Political Affairs (GPA) team organised a virtual conference for Investment Councils – building on the previous events in Istanbul 2015, London 2017 and Tbilisi 2018. The last conference featured the Investment Councils' role in supporting the economic recovery of the EBRD countries of operations in the aftermath of Covid-19.

The Rapid Advisory Response framework has supported the implementation of policies that help mitigate the economic impact of the pandemic by leveraging the EBRD's own resources and its network of policy makers and experts.

The EBRD supports the Investment Councils through secretariats, which coordinate and facilitate the work of the councils. They also provide economic and legal analysis and advice to support the work of the councils and support reform efforts. In total, over 50 experts and staff are working in 12 secretariats in Albania, Armenia, Belarus, Georgia, Kosovo, Kyrgyz Republic, Moldova, Montenegro, Tajikistan, Tunisia, Ukraine and Uzbekistan. The Investment Councils are funded with support from the EBRD Shareholder Special Fund, the EBRD Multi-donor Account for Ukraine, the Swiss State Secretariat for Economic Affairs and the UK Good Governance Fund [1].

## **SOLIDARITY PACKAGE**

The EBRD Resilience Framework has streamlined the process for providing finance to meet the short-term liquidity and working capital needs of existing clients (existing clients are partners who have an outstanding EBRD loan or equity investment or who have repaid or exited since 1 January 2019). The Bank has expanded financing under the Trade Facilitation Programme, keeping open the channels of commerce. The EBRD has offered fast track restructuring for distressed clients. The Bank has enhanced established frameworks that can reach out especially to SMEs and corporates that are not yet its clients, making the real economy more resilient. The Vital Infrastructure Support Programme has helped meet essential infrastructure requirements, including financing for working

capital, stabilisation and essential public investment. The emergency channels targeted all sectors of the economy, but especially those badly affected by the crisis, including financial institutions, SMEs and corporate sectors such as automotive and transport providers, agribusiness, and medical supplies [7].

## **REPOSITORY OF POLICIES – THE EBRD POLICY COMPARATOR**

The EBRD has established a repository of policies adopted in response to the pandemic to track systematically each country's experience and draw lessons, both within the regions and from selected countries elsewhere. Over time, the repository will be used to identify innovative and effective policies that bring real benefits in terms of economic resilience and recovery and can be introduced more widely. The repository includes various knowledge products, including country pages, in-depth case study analysis, webinars and other relevant materials [3].

In general, authorities in countries of operations, have reacted promptly to provide support to the economy. The two most used crisis response measures so far have been, first, deferral (combined in some cases with reduction) of taxes and social contributions, and loan deferral schemes. Also, nearly all countries of operations have raised spending on healthcare to help cope with the medical crisis. In terms of frequency, these measures are followed by policies supporting liquidity of the banking sector and those supporting more directly liquidity of firms, either by subsidizing wages or providing cheap loans/guarantees. Lastly, the only other measure taken by more than half of countries of operations is the one related to price controls, concentrated mostly in low-income countries to control food prices. Export controls have also been introduced temporarily in a few cases [3].

## **STATE CREDIT GUARANTEE SCHEMES**

In response to the coronavirus pandemic, a number of countries in both Western Europe and the EBRD regions have scaled up state credit guarantee schemes (SCGSs) to mitigate this urgent liquidity problem and stimulate an economic recovery. This instrument, if well designed and implemented, can be an efficient crisis response mechanism, as it relies on the banking sector to channel financing to firms, while safeguarding the soundness of the banking sector by partly assuming the risk of on-lending.

Many firms, especially SMEs, have faced unprecedented liquidity strains. State credit guarantee schemes have emerged as a potentially effective policy tool for addressing the liquidity gap [2]. State credit guarantee schemes have been one of the most widely used instruments both during the global financial crisis and during the Covid-19 economic crisis. Almost two-thirds of EBRD countries of operations have been implementing or expanding this policy instrument [9].

## CONCLUSION

During the crisis, the EBRD has helped protect the economy and promote further transition not only through investments but also by providing governments and other state institutions with policy advice. The EBRD has supported the authorities in its countries of operations in designing measures to cope with the immediate disruption of the coronavirus crisis. The Bank also provides an up-to-date overview of the crisis-response policies adopted in the EBRD regions, as well as analysis of best practices and policy options in the countries where it work. The Bank's Resilience Framework has provided finance to meet the short-term liquidity and working capital needs of existing clients [10].

The Bank has rapidly rolled out investments and disbursements to its clients and countries suffering from the economic shock of the crisis. The EBRD adapted and scaled up existing instruments and developed new initiatives to provide finance and rapid advisory and policy support to help businesses and government combat the economic and societal implications of the virus [7].

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# IMPACT OF FOREIGN INVESTMENT ON SAUDI ARABIA'S ECONOMY

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## ABSTRACT

Since the world became a small village, the research and studies in any region of the world reached everywhere, and many of the world's economic units turned to internal and external investment. Since we live in the Kingdom of Saudi Arabia and it is one of the world's largest economies and it is ranked 19th globally and first in the Arabic region, recently it has strived to encourage foreign investment and has put in place many facilities, opened up to the outside world, worked on five-year regulatory plans and also an economic vision 2030. Foreign direct investment is about entering economic units into one of the developing countries to revive the economy, reduce unemployment and introduce new technology. But in the case of Saudi Arabia with its current economic strength and projects of billions of U.S. dollars, and also in a period that was the fifth in the donor ranking, the impact of foreign investment on the economy of Saudi Arabia has to be examined and we will address several sectors such as education, industry and agriculture.

**Keywords:** *economic units, organizational plans, foreign direct investment, economy in Saudi Arabia, sectors in Saudi Arabia*

## INTRODUCTION

When developing countries need funds to meet their needs, they tend to take loans, which entails repayment for several years, and also repayment of interest on these loans, but after economic globalization and some economic units emerged. The idea of foreign investment in developing countries has emerged. Foreign investment is known to be the investment of countries or large companies in developing countries, so that both parties benefit and contribute to improving economic conditions. Host countries have improved their conditions so as to attract foreign investment in terms of facilitating administrative steps and their centrality in order to promote international innovation and the consolidation of most tax incentives. However, it has been noted recently that Saudi Arabia has been active in attracting foreign investment despite the fact that it is one of the economically strong countries and is ranked 19th globally and the first Arab and that it does not need economic support.

## **IDENTIFICATION OF FOREIGN INVESTMENT IN TERMS OF DEFINITION TYPES, FORMS, DIVISIONS AND CONSEQUENCES**

### **Definition of Foreign Direct Investment FDI:**

According to the International Monetary Fund (IMF), 10% or more of the capital stocks are owned by an enterprise. This ownership is linked to the ability to influence the management of the enterprise. Thus, it is differentiated from investing in portfolios and investment funds i.e. purchase corporate assets with the aim of achieving a financial return without controlling its performance. It is necessary to avoid the difficulty of accurately differentiating between the two types [1]

The types of foreign investment are:

#### *First - foreign direct investment*

It is a foreign investor (a company or a person) performs a long-term investment activity in a particular country (the host country of the investment) and involves the foreign investor's ownership of all or part of the project. It is the establishment of a project or the purchase, in whole or in part, of projects already existing in the host country's economy.

Consequently, the foreign investor has the right to manage the project and control it entirely or to participate in the administration in the case of joint ownership of the project They include vertical & horizontal investment, or accumulate (diverse)[2]

#### *Second - Indirect foreign investment:*

The indirect foreign investment takes possession by foreigners of securities (shares and bonds) in the host country issued by a company or government entities.

The companies are owned by the host country and the foreign investor is not entitled to run the company.

This investment takes the form of loans given by individuals or companies and it is short-term investment [3]

#### *The forms of foreign investment for host countries are:*

1. Joint Ownership Projects - Joint Investment.
2. Projects wholly owned by foreign companies in the host economy.

3. Multinational companies - companies that own many enterprises in different countries [4]

Foreign investors are always looking for investment opportunities to increase profitability and move away from risk in all its forms.

The motivation factors of foreign investment can be represented in any country by the attractiveness of competition and the form and structure of government, as well as the infrastructure and key factors such as health and education, as well as the need for attention to social aspects [5]

Foreign investment can be divided into two divisions in terms of duration (time standard):

*Section I: Short term investments.*

These are investments that are made for a year or less. the investment is regulated by the Contracting Parties' rights and obligations, which is worth within one year.

*Section II: Long-term investments.*

Long-term investment is reflected in loans of more than one year's duration

Which focuses on fixed assets such as establishing branches for foreign projects within the borrowing country [6]

Effects of foreign investment on host countries' economy:

Foreign direct investment is one of the most important means of economic development, resulting in the creation of jobs and the providing of new technology to the country, as well as the transfer of expertise and knowledge from one country to another and the most important of these material effects is revenues.

Identification of bilateral international foreign investment agreements between the investor and the host countries.

Each host country encourages foreign investment whether it is direct or indirect. Laws and regulations and the sectors in which the foreign investor will invest in the host are determined. For example, some countries are limited to the investor's work in industries and some have privatized key enterprises in the host country such as electricity and water that may be in another country of red lines for foreign investors. That is why, Bilateral conventions protecting the parties had to take place.

For example, owning a house in countries such as Turkey, Canada and Bahrain is considered a foreign investment and the nationality of those countries is granted according to it. Comparing it to a country such as Saudi Arabia, it is strictly prohibited to own any property in the cities of Mecca and Medina. The rest of the cities are limited to owning the workplace, workers' accommodation and a private home only. There are no established laws that bind the investor or host country to binding rules but there are agreements such as international trade agreements.

With thousands of agreements around the world in terms of international investments and despite the establishment of rights and provisions between the parties, each agreement is different from the other because of the differentiation of the nature of any investor and any host country. So, they endeavor to stabilize and adapt these agreements in a way that allows them to take the space they need. Each country has its own controls that are variable, for example, such as the entry of the investor with a specific capital or one of the fields of work within the borders of the host Country, or even specifying the period for which the investor stays within the host country. But to protect the investor, the World Bank has established controls on the host country to be a member of the World Trade Centre so as to have reference in the event of conflict. There are prominent rights protected by bilateral trade agreements for foreign investors is also considered as a fundamental rule on which the host makes the agreement and that concluded very important clauses, such as:

#### Employment and employees and how they are employed

The percentage and number of employees in the agreement varies depending on the type of investment. For example, an industrial investment is agreed that 50% of citizens should be employed. In the oil industry, the employment rate of citizens may not exceed 10%, due to experience, efficiency and capacity.

#### Cash transfer

It is well known and agreed in accordance with international regulations and laws that the host country must give freedom to the foreign investor to turn all profits into its own state.

However, in some agreements, the foreign investor must keep a portion of the money in accounts within the host country to ensure employees' rights.

#### Protection from confiscation - such as expropriation

According to international law, expropriation from a foreign investor or confiscation is not permitted unless there are violations or imports of materials harmful to the environment, crime or other illegal acts. A distinction must be drawn between expropriation and regulation. A State is not responsible for the

loss resulting from public taxation or global economic problems. In terms of regulation, a State has the right to regulate its infrastructure in all its forms, but in the regulatory case it must be compensated.

#### Public interest and non-discrimination

The host State does not have the right to pay its attention in the public interest in order to harm the foreign investor and must maintain it until the end of the Convention, not to discriminate in treatment between the citizen and the investor, but also not to discriminate between an investor from a State over another investor from a second State.

#### Compensation

Compensation includes two types. The first one when it is proven that the state has seized the rights of the investor, then compensation will be made for all damages that befell the investor.

The second compensation is for expropriation that occurred under regulatory procedures in favor of the state.

The host country must respect pledges and agreements towards investors.

#### Political violence and internal conflicts

According to international law, there is no obligation of host State to compensate foreign investors for any of the losses caused by wars or disturbances within the State unless it occurs in purpose [7]

#### Impact of investment on some sectors of the economy in Saudi Arabia

In the past, the Saudi economy was very weak, but since the equitable profits with Aramco took place, it seemed to rebound. It became a Rentier economy (it relies on only one commodity). The Kingdom applied economic development plans, and it became the strongest among the Arab and ninth countries in terms of economic stability.

#### Educational, Agricultural, Industrial Sectors and Foreign Investment

##### Education Sector:

The educational sector affects the economies of countries, and this is what the Kingdom has moved towards in all stages of its five regulatory plans. It has given education great attention and allocated the largest budgets for it in the country in order to develop human resources, enhance research and innovation,

increase productivity, and also educational tourism in order to attract students and researchers. The following is a table specifying spending on education in the Kingdom of Saudi Arabia:

**Table 1.** *Expenditure on Education during the Years -2016-2023 by Ministry of Finance/SAR Billion-2023*

| N | year | Education Budget |
|---|------|------------------|
| 1 | 2016 | 207.145          |
| 2 | 2017 | 200.329          |
| 3 | 2018 | 192.361          |
| 4 | 2019 | 192.622          |
| 5 | 2020 | 193.168          |
| 6 | 2021 | 185.702          |
| 7 | 2022 | 185.103          |
| 8 | 2023 | 189.000          |

Source: <https://www.my.gov.sa/>

By observing Table No. 1, we see that there is a decrease in spending between the years 2016 to 2023

The reason for this is due to the internal and external economic conditions that the Kingdom went through to reduce the deficit in the Kingdom, and despite this, it is considered the first in spending at the level of the Gulf Cooperation Council countries.

The Kingdom has advanced in a number of sub-indices of global innovation, surpassing 107 countries. It has also excelled in 3 sub-indices of the Global Innovation Index for the year 2021, where it has advanced over 105 countries. In the general research and development index, it has ranked 26 out of 131 countries, and in the higher education index it has achieved 29 ranks. surpassing 102 countries in 2021.

At the university level, the Kingdom outperformed 107 countries in the average ranking of universities according to the classification(QS)

It ranked 24th, and this indicator measures the average grades of the best 3 universities[8] .

The impact of foreign investment on the educational sector is somewhat good. The investor can open foreign schools or make a joint investment, but in this sector the government imposes that Saudis be employed and that academic subjects be introduced. As for higher education, so far, foreign investment has not been introduced into it.

### The Agricultural Sector

Agriculture constitutes an important part of the economy of countries because it provides many food resources and job opportunities, but the Kingdom of Saudi Arabia faces great challenges in terms of agriculture because its climate is very hot and its rain is rare in most regions. Agriculture in the Kingdom was carried out using traditional methods, but after the development of the Kingdom

He developed organizational plans and also established foreign investment laws that contributed to the entry of foreign capital in order to advance the agricultural sector. The government dug wells, built agricultural roads, distributed arable land for free, bore 45% of the equipment costs and 50% of the value of fertilizers, and provided long-term interest-free loans. Hence, the Kingdom continued to import due to the challenges we mentioned previously, so regulatory plans moved to increase the area of cultivated land, and its dependence on expatriate workers affected the lack of job opportunities for citizens in this sector.

The impact of foreign direct investment in the field of agriculture did not exceed 5% of the total investments in the Kingdom. This is due to the nature and desert climate. It relies mainly on water desalination and uses the spraying method in agriculture. [9]

### Industrial Sector:

After the discovery of oil and gas in the Kingdom, which is considered the most oil producing and exporting country in the world, the industrial sector in the Kingdom became the most vital sector and all sectors are based on it. As a result, all sectors in the Kingdom became active. After the regulatory plans, they tended to encourage the private sector to establish factories in order to achieve the goals of economic development to reduce Dependence on oil and gas. The Saudi Industrial Development Fund was established, and also to develop this sector, the Royal Commission in Jubail and Yanbu was established to take over the management of the industrial cities. There are two main types of industry within the Kingdom: a public sector, which includes petrochemical industries, oil refining, military industries, weapons, and ammunition, and a private sector, which are industries carried out by the private sector, most of which are local consumer goods, of which a small portion is exported to neighboring markets, such as the cement, fertilizer, and food industries.

The Saudi government issued a law to protect and encourage national industries, which includes:

1. Exempting all imports necessary for industrial projects from customs duties.
2. Granting plots of land to build factories
3. Protecting local production by limiting or preventing the volume of foreign imports of goods similar to local ones, raising customs duties on foreign imports, and also providing financial aid to industrial projects.
4. Exempting local products from export duties in order to compete and increase exports [10]

The Saudi Industrial Development Fund achieved exceptional results during the year 2020 AD, approving loans amounting to 17.6 billion riyals, achieving the highest value of approval in its history. It approved 212 loans and 201 projects benefited from them in the industrial, mining and energy sectors. Small factories accounted for 84% out of the total number of loans [11]

In terms of the impact of foreign investment within Saudi industries, the volume of foreign joint investment amounted to about SAR 542 billion, representing 37% of the sector's total investments and 17% of the total number of existing factories up to May 2023.

The number of factories with foreign investment is 930, representing 9% of the total number of factories with investments exceeding SAR 71 billion. The number of factories with joint investment reached 924, constituting 8% of the total factories and investments estimated at more than 470 billion riyals, while the total number of factories in the industrial sector as of May 2023 reached 10,910 plants with investment size reaching more than 1.455 trillion riyals [12]

#### Foreign Investment Sector:

The Kingdom of Saudi Arabia is considered one of the first countries to be interested in foreign investment, as it ranks first among the Arab countries in terms of direct and indirect investment flows. Despite the presence of regulatory plans in the Kingdom, which contributed to attracting capital to make investments within the Kingdom, it did not achieve what was required. However, After the Kingdom's Vision 2030, it became enthusiastic about attracting more investments, and this is evident from the steps it took, such as developing the Investment Authority into the Ministry of Investment, issuing the Foreign Investment Law, and reducing the corporate profits tax. The Ministry of Investment's message states: "Enhancing the Kingdom's position as a leading



investment destination and making it an attractive and stimulating investment platform for investment and expansion in order to achieve sustainable economic growth.”

What caught my attention when reading the regulations, conditions and services on the website of the Saudi Ministry of Investment is the presence of an item in the list of services, which is the investor’s journey, which is a comprehensive and easy explanation. For example, any investor who wants to enter the field of the health sector / Ministry of Health after submitting the requirements, then he has to enter to the website. <https://misa.gov.sa>

Then choose from the list of services, the investor’s journey, to access the icons, which are as follows:

1. Obtaining a license from the Ministry of Investment, which includes:
  - A. Services Guide, which includes all services in which investment is permitted.
  - B. The foreign investment law, which is to know all the regulations related to the sector.
  - C. The executive regulations of the foreign investment law, which defines all bilateral and legal agreements.
2. Obtaining the commercial register.
3. Submit a license application.
4. Conduct a field inspection.
5. Issuing the license.

Note that the all the offices that the investor needs to visit are in one building in order to facilitate work.[13]

#### Foreign investment opportunities and advantages in Saudi Arabia

The Saudi economy has some features that make it attractive for investment. The Kingdom has achieved progress in the ease of doing business index and facilitating all procedures and transactions. More than 555 reforms have been completed in investor services, the most prominent of which is reducing the time to start an activity to 30 minutes. Also among the advantages are low inflation rates and high purchasing power. The per capita GDP reached \$20,000.

The Saudi GDP has reached 782 billion dollars, and foreign investments are about 230 billion, and these statistics.

The increase in population growth, which shows that the Kingdom’s population has reached approximately (32,175,224) in 2023, and the nature of society in which the percentage of young people under the age of 25 to 50% of the population is one of the advantages of the Saudi economy.

The Kingdom of Saudi Arabia has promising investment opportunities due to the potential it possesses of a strong economy, and these opportunities are not exploited, which encourages any investor to turn to it. It is a destination for those with unique ideas and projects, due to the abundance of natural resources, and its distinguished location for trade located between three continents.

Among the most important projects are the NEOM, Red Sea, Qiddiya, and Roshan Group projects (specializing in building residential units), as well as King Abdullah Economic City, the largest tower in the world in Jeddah, and King Salman Park in Riyadh.

We will discuss three of the currently existing projects:

#### Neom Project

A vision of what a new future might look like, NEOM will be a destination and home for people who dream big and want to be part of building a new model of sustainable living, work and prosperity. NEOM will cover an area of 26,500 square kilometers and will be powered by 100% renewable energy.

The NEOM project is a confident start to the progress of humanity, and the embodiment of a vision that represents what the new future will look like. Located in northwest Saudi Arabia on the Red Sea, it is being built from the ground up as a vibrant metropolis – a place where entrepreneurship will define the course of this new future. It will be a destination and home for ambitious people who seek to be part of building a new model of exceptional living and creating prosperous companies. NEOM will also demonstrate creativity in the field of environmental conservation. NEOM will include a number of cities, ports, commercial areas, research centers, sports and entertainment facilities, and tourist destinations. It will also be a place to live and work for more than a million people from all over the world. As an innovation center, the NEOM project will attract pioneers, business leaders and companies to research, incubate and market new technologies and projects in innovative ways. NEOM's residents will embody ethics and values that represent the spirit of community, and will adopt a culture that embraces exploration, adventure and diversity, supported by a legal system consistent with international norms, a system that does not stop developing to produce economic growth and a society crowned with success and prosperity.[14]

#### Red Sea Project:

The Red Sea project is considered one of the most important tourism projects currently in the Kingdom. It is located on the Red Sea coast between two cities. The location was chosen strategically to be close to a number of countries, and the project area extends about 34 thousand km<sup>2</sup>.

The most important features of this project is that it contains a natural reserve and is considered one of the tourist destinations. Tourists can practice many hobbies, such as diving among coral reefs and walking among all the dormant volcanoes. The project contains many islands, and only 22 islands have been exploited.

The project is located near archaeological and heritage monuments. What distinguishes the place is that the water temperature is compatible with all types of marine practices, as the Red Sea region has warm weather all the time, which increases the arrival of visitors to the region throughout the year. The first stages are likely to be completed in 2025.

This phase witnesses the construction of 50 luxury hotels, golf courses, desert and mountain resorts, and a modern international airport.[15]

### **Qiddiyah Project**

It is one of the most giant projects in the Kingdom, a source followed by observers from within the Kingdom. The project consists of 45 projects and more than 300 activities across the winter creativity, hospitality, entertainment, and sports. 20 companies have been assigned to revolutionary engineering, 12 of the main landmarks of the facade.

Qiddiya Investment Company led the project development project and the project area extends over an area of 334 square kilometers at the entrance to Riyadh. This was designed as a reflection of the pattern of the natural innate environment and consists of the general establishment of Qiddiya consisting of five development areas, which is a resort area to contribute to movement, movement and excitement. For this reason, it becomes the capital of entertainment, sports and arts.

The CEO of Qiddiya Investment Company, Michael Reininger, said, “We wanted to develop an identity that would be unique and distinctive of its kind that we will present. We will create a brand that symbolizes the home of inspiration and new experiences during the period of the horizon of life experiences that stimulates investment with a clear, youthful and optimistic character, as Qiddiya will introduce its visitors to them through “Entertainment, sports and arts to explore new horizons and encourage more new people and citizens to contribute to building the future and greater progress and prosperity in the Kingdom.”[16]

## **CONCLUSION AND RECOMMENDATIONS**

Foreign direct investment provides a material and technical addition to both the investor and the host country

Bilateral agreements in foreign direct investment are variable depending on the strength of the investor and the host country.

The Kingdom of Saudi Arabia has a strong economy and still relies on oil as a primary support for all sectors of the economy in the Kingdom.

It is not necessary for the host country to have a low economy in order to encourage investment, and a strong economy can be supportive and stimulating for economic development.

As for recommendations

Intensifying the efforts of countries to strive to be invested internally and externally according to the advantages available to them

The investor and the host country rely on fixed agreements, rules and clauses for all countries

The Kingdom of Saudi Arabia has a strong economy and high advantages, and in order to attract companies and capital to invest within it, the international marketing process must be increased.

The projects currently established in the Kingdom will be a great motivation for a lot of investment in them.

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# MEASURABILITY AND RELIABILITY – HOW CREDIBLE ARE ESG RATINGS?

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## ABSTRACT

The study is seeking to answer the question whether there is a connection between companies' ESG performance and their financial performance.

Our previous research examined how consistent, transparent and comparable ESG ratings are. All this was done based on the examination of the companies' sustainability and social responsibility reports and the comparison of their content. The study came to the conclusion that regardless of industry, companies publish sustainability reports of various depth and content. The ESG rating companies largely base their work on this, create and calculate an ESG score for each company, mostly with the aim of influencing market participants, investors, and creditors in their decisions. (Lukács et al., 2023) [7]

Continuing this research, our hypotheses have been formulated. If the company performs well in the environmental, social and sustainability areas and this is "priced" by the rating, then we expect the company to perform well – or at least better than its competitors – financially as well. We examined the return on capital investment in companies, the generated revenue, and we also presumed that a company that performs well based on ESG criteria can attract more investors, i.e. it is less dependent on external creditors.

**Keywords:** *Financial statement, ESG score, indicators, P/E ratio*

## INTRODUCTION

According to Milton Friedman, the main task of companies is to maximize the investors' return. In the past century, environmental, social and sustainability performance was not important when examining these values. After the ratification of the Kyoto Protocol and its entry into force, the consideration of sustainability aspects became increasingly important when examining the operation of a company. The Kyoto Protocol was only supposed to reduce the emission of greenhouse gases, and its requirements were accepted by the ratifying countries. Environmental and social processes have called into question the future of our planet in other areas as well, as a result of which not only air pollution, but also water, green areas, social inequalities, the situation of job takers, and the management practices of companies (among other things) have become the focus of attention. ESG performance considers all these together and converts them into metrics.

When examining the consistency of ESG indicators, it is worth examining three areas: dimensionality, reliability and validity. ESG is a multidimensional system. In order to obtain reliable values from the ESG indicators, it is necessary to break down the individual dimensions (environmental, social and governance). As a result, ESG raters have to use methods that allow each indicator to be approached from several directions. In addition, knowing how to convert the indicators into a scoring process is essential in order to be able to interpret these indicators properly. It is also a challenge to transform these indicators into a unified system in order to make them comprehensible to everyone. (Widyawati, 2020) [10] Some studies also draw attention to the fact that ESG indicators should not be converted into one composite score, because positive and negative indicators are separate constructs, and when aggregated, the information content of the data dissipates. (Semenova - Hassel, 2015; Capelle-Blancard - Petit, 2017) [8] [4]

To test our hypotheses, the regression calculation method was used. Regression is a common tool for analyzing the relationship between variables, which basically examines how a distinguished variable that is the subject of the study, called the outcome variable (or dependent variable), depends on one or more so-called explanatory (or independent) variable. This method is suitable for examining the relationship between variables, their closeness, and for analyzing the impact of influencing factors.

There are numerous ways to measure the performance of companies. In economics, there is business analysis and reporting analysis. A business analysis entails a broader interpretation, its purpose is to provide stakeholders with information about business operations. The conclusions of the business analysis can be harnessed by stakeholders in a wide range of business decisions. It helps the owner, the potential investor, the credit provider, the management, the business partners and the control bodies in the assessment and evaluation of the enterprise.

The report analysis is a narrower concept, a subfield of business analysis. During the report analysis, one or more companies perform analyses in relation to one or more business years in order to learn about the property, financial and income situation of the company, thus supporting the correct decision-making processes of managers, investors and creditors. The quality of the report analysis depends to a large extent on the reliability of the financial statements.

## **RESULTS OF PREVIOUS INTERNATIONAL RESEARCH**

Serafeim - Yoon (2022) [9] in their study investigated the extent to which a company's ESG rating can predict future ESG-related news. The study revealed that the ESG rating predicts ESG news, however, the discrepancy between the raters weakens this correlation. Furthermore, it was also observed that positive ESG news elicited a positive market reaction and negative ESG news elicited a

negative market reaction. However, it is interesting that companies with a high ESG rating react positively to positive news appearing on the market to a lesser extent. This can be explained by the fact that these positive news tend to be previously reflected in the stock prices. (Serafeim - Yoon, 2022) [9]

Avramov et al. (2022) [2] examined the effects of the uncertainty of the ESG rating in relation to portfolio selection and asset pricing. The study concluded that the uncertainty of the ESG rating reduces investor demand for shares. (Avramov – Cheng – Lioui – Tarelli, 2022) [2]

Gregory (2022) [6], in their research published in the *Economic and Finance Journal*, examined whether there is a correlation between company size and ESG rating. The author examined the effect of company size on ESG rating by analyzing rating agencies and the industrial sector. Relying on the predictions of the organizational legitimacy hypothesis by Dremptic, Klein, Zwergel (2020) [5], they found that the hypothesis formulated by the authors was not supported during the examination of the industrial sector and outlier values. While in overall analyses there is a positive correlation between company size and ESG rating, this effect disappears or may even be negative when examining industry sectors, outliers or rating agencies separately. This is a significant finding because it can influence the relationship between corporate social responsibility (CSR) and corporate financial performance (CFP). (Gregory, 2022) [6]

Apergis-Poufinas-Antonopoulos (2022) [1] investigated the relationship between debt service cost and ESG scores based on the view that high ESG scores are positively related to a company's solvency. To explore this relationship, the relationship between the ESG performance of bond-issuing companies and bond spreads issued on primary markets was analysed. ESG, financial and bond data of S&P 500 companies between 2010 and 2019 were used for the study. According to the results of the research, all ESG factors (E, S, G, and combined) have a negative and significant effect on bond yields. The remaining time to maturity has a positive and significant effect, while the issue rate and company size have a negative and significant effect on bond yields. (Apergis – Poufinas – Antonopoulos, 2022) [1]

Overall, it can be stated that these studies point out that the ESG system is not yet a mature system. This does not mean that ratings are not to be observed, rather, it suggests that the process of rating and the reaction and influence of investors is lengthier.

Berg – Kolbel – Rigobon (2022) [3] drew up the most important conclusions regarding the current system: companies must carefully review which data is used with which method when preparing reports. For investors, it is a challenge to reconcile different ratings. Last, for regulators it is an important task to develop a coordinated ESG framework. The harmonization of the system would also



contribute to the publication of reliable data, in addition to making the data comparable. (Berg – Kolbel – Rigobon, 2022) [3]

## **ESTABLISHING HYPOTHESES**

During our research, we examined the companies' past performance and compared this with their ESG scores, thus formulating the following three hypotheses.

*Hypothesis 1: There is a negative correlation between the company's ESG score and the debt-equity ratio achieved by them. According to our assumption, good ESG performance attracts investors, so the company has less need for foreign capital.*

The next aspect of the investigation was the stock market evaluation of the companies. For this purpose, we compared two indicators with the past ESG score - we scrutinized the value of the EPS and P/E indicators. The examined period is the financial years 2019-2021 in terms of performance, and we compared the ESG scores obtained in the financial years 2018-2020, taking into account that the feedback of the market generally follows the signals given by the raters. We formulated the following hypotheses:

*Hypothesis 2: There is a positive correlation between the past ESG score of companies and the EPS indicator achieved in the following year.*

*Hypothesis 3: There is a negative correlation between companies' past ESG score and their P/E ratio in the following year.*

## **PRESENTATION OF THE RESEARCH FINDINGS**

To create the database, we used data offered by the financial market data provider Refinitiv Eikon. The examined period is the financial period up to 2019-2021, to which we linked the ESG scores of the years up to 2018-2021. During the investigation, we compared the profitability and profit-related data for the same years, and the data examined from the investor's point of view with the ESG scores of the previous years.

In the two-variable linear regression model presented earlier, the x values represent the ESG score, the y values represent the various performance indicators on the basis of which the performance of the companies were analyzed. The ESG score was compared to the D/E ratio, EPS, P/E and total return rate in the period under review.

### **Testing the first hypothesis**

One of the most important indicators within the analysis of the wealth situation is the debt-equity ratio, which denotes the structure of the wealth. The

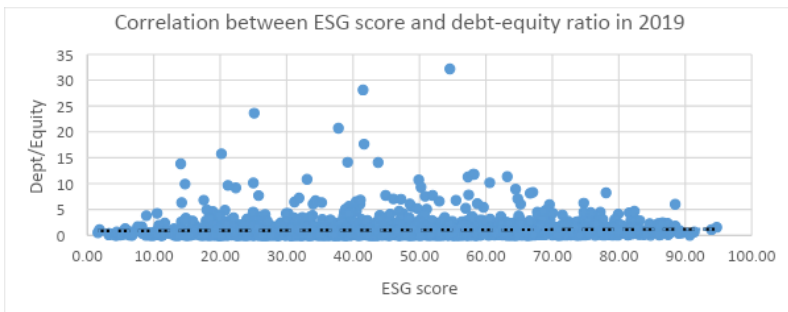
debt-equity ratio is the ratio of foreign capital to equity capital, which shows the extent to which the company is financed from external sources compared to the available equity capital. There is no clear value below or above which the value of the indicator is inappropriate, however, it can generally be said that the higher this ratio, the riskier a company is, as it depends to a greater extent on external creditors, thus the burden of foreign capital is also high.

In the first hypothesis, it was stated that there is a negative correlation between the ESG score and the debt-capital ratio, so the higher the ESG score a company has, the lower the D/E ratio. This means that fewer external resources are required for its operation, which makes its operation less risky and less uncertain.

As a result of comparing the ESG score and the D/E ratio for the 2019 financial year, the following regression equation was obtained:

$y = 0.0035x + 0.8342$ . It can be observed that  $\beta_1$  is very low, so the relationship between the two values cannot be clearly stated. In this case, the  $\beta_0$  value only has a mathematical meaning, but this value is not relevant from the point of view of the analysis, so it was ignored during the study.

For 2019, the value of the correlation coefficient showing the relationship between the two values is  $r = 0.036$ , which in turn assumes a very weak but positive correlation between the ESG score and the D/E ratio indicator. The value converges to zero, which means that there is essentially no linear relationship between ESG scores and the D/E ratio indicator. This statement is also supported by the value of the determination coefficient. The value of the indicator is  $R^2 = 0.0013$ , i.e. the ESG score explains 0.13% of the D/E ratio, which is an extremely low value. Based on the above, it can be concluded for 2019 that the model is not suitable for drawing conclusions, its explanatory power is negligible. The results can also be seen in the diagram below:



**Fig. 1.** Correlation between ESG score and debt-equity ratio in 2019

Source: Based on Refinitiv database (2023) [11], own calculation and editing

For the financial years 2020 and 2021, we were able to demonstrate a similarly weak, or rather positive correlation.

### Testing the second hypothesis

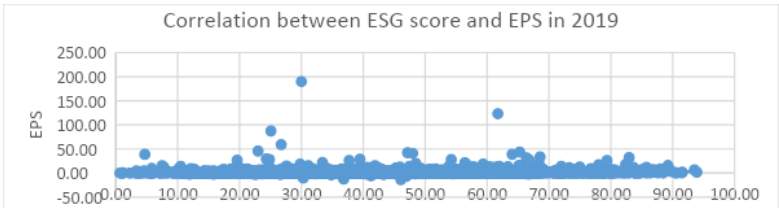
In order to achieve the research goal, the main focus is on the analysis of the income situation, i.e. what effect the ESG classification has on the financial performance of enterprises. The best-known area of income situation analysis is the income statement. With regard to the income statement, we examined the impact of the companies' ESG classification on shareholder values. In this case, the income data were compared to the previous year's ESG score, as the impact of the classification on investor decisions is not reflected in the given year, but in the following years. Accordingly, we compared the ESG scores obtained in 2018 with the 2019 financial data, the 2019 data with the 2020 data, and the 2020 ESG scores with the 2021 financial data.

During the analysis, the data of market listed companies were examined. Among these companies, one method of performance analysis is to relate the income to the number of shares. To determine the profit per share (Earnings per Share, EPS), the value of the after-tax income must be compared to the number of all shares.

According to our second hypothesis, we expect a positive correlation between the past ESG score of companies and the indicator suitable for their evaluation on the stock market in the following year. We hypothesized that the ESG score had a positive effect on the decisions of external investors, thus a higher ESG score ended in higher earnings per share for companies in later years.

When examining the relationship between the ESG score and earnings per share, the first period examined was the year 2019, to which the 2018 ESG data were compared. After running the regression calculation, we obtained the following equation:  $y = 0.0196x + 1.5264$ . This means that the correlation between the ESG score and the EPS is very weak.

Both the correlation coefficient and the determination coefficient are too low to attribute a significant influence to the joint involvement of the two indicator numbers. The data is also shown in the following chart:



**Fig. 2.** *Correlation between ESG score and EPS in 2019*

Source: Based on Refinitiv database (2023) [11], own calculation and editing

A similar correlation can be shown for 2020 and 2021, i.e. it can be concluded that the ESG performance has no effect on the data which influence investors' decisions.

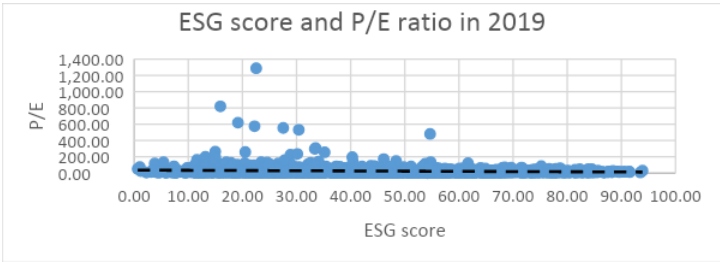
### **Testing the third hypothesis**

Another indicator of the value of the company's securities, the Price/Earnings Ratio (P/E), can be calculated using the EPS value. The P/E ratio is calculated by dividing the share price (P) by the earnings per share (EPS). The P/E ratio compares the company's earnings to its share price, so it shows how much stockholders have to pay for a dollar of earnings.

In the third hypothesis, we stated whether there was a negative relationship between companies' past ESG score and the P/E ratio achieved in the following year. If the operation of a company - and thus its profitability - is positively affected by the ESG classification, its P/E ratio will be lower. From an investor's point of view, a lower P/E ratio promises faster ROI than companies with a higher value, i.e. the lower the value of the P/E ratio, the more attractive a company will be to investors.

Similar to the investigation of the value of the EPS indicator, the examined period was the financial years up to 2019-2021, to which we compared the ESG scores of the years up to 2018-2020. As a result of comparing the 2019 P/E ratio to the 2018 ESG score, the regression equation was:  $y = -0.2551x + 37.17$ . This means that if the ESG score increased by one in 2018, the value of the P/E ratio decreased by an average of 0.2551 in 2019. Based on this, it can be concluded that the correlation is negative between the two indicators, but to establish this, the correlation coefficient must also be examined.

The correlation coefficient in 2019 between the ESG score and the P/E ratio is  $r = 0.1051$ . The relationship between the two indicators is therefore very weak, a linear relationship cannot be assumed between the two values, but its direction is positive based on this. This means that the change in the ESG score has a very small, or rather zero effect on the change in the value of the P/E ratio. The explanatory power of the model is expressed by the determination coefficient with the value  $R^2 = 0.011$ . The regression equation is therefore able to explain 1.1% of the change in the value of the P/E indicator. The data is represented by the following diagram:



**Fig. 3.** correlation between ESG score and P/E ratio in 2019

Source: Based on Refinitiv database (2023) [11], own calculation and editing

The 2020 financial year performance data were compared with the ESG scores obtained in 2019, resulting in the equation  $y = -0.2755x + 42.282$ . In the examined period, an increase in the previous year's ESG score by one unit caused a decrease of 0.2755 in the value of the P/E ratio in the following year. In this case too, a negative relationship can be assumed in the comparison of the two indicators.

The value  $r = 0.1092$  of the correlation coefficient, on the other hand, assumes a positive relationship between the two indicators, that is, the values changed in the same direction. However, the value of the indicator is again close to zero, so there is no linear relationship between the two values. This result is also confirmed by the determination coefficient  $R^2 = 0.012$ , which means that the change in the ESG score can explain 1.2% of the exchange rate/profit ratio. The regression line does not fit the data exactly.

Overall, it can be established in the context of the ESG scores and the P/E ratio in the examined period that the proposed hypothesis was not proven. It is not possible to establish a functional relationship between the two indicators, the linear correlation and determination coefficient did not support the assumption either, their value was close to zero in all cases.

## CONCLUSION

Summarizing the results of the analysis, it can be concluded that the ESG score does not yet have an impact on the companies' operations. The hypotheses we put forward, in which we assumed that the ESG score already has an effect on the operation of companies from an economic point of view, were not well-founded in most cases.

Within the framework of this thesis past data were examined, however, a possible extension of the research could entail a predictive analysis using this data. One of the functions of report analysis is planning, where the data obtained during the analysis is used to make decisions that provide the basis for optimal future action.

There is potential in continuing the research. The analysis by industry or geographical area could refine the data, and it is also an option to examine the ESG value along dimensions as well. Even the analysis of the methodology used by qualifiers indicated that the performance in different dimensions carry different weight and significance during the rating process. A possible further direction of our research is to examine which dimension the investors and the market prioritize. This can also provide an answer to the preference between sustainability and social issues.

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# **STRATEGIC THINKING AND BUSINESS QUALITY MANAGEMENT THROUGH BIOHACKING IN THE ERA OF DIGITAL TRANSFORMATION**

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## **ABSTRACT**

In the contemporary world of rapid digital transformation, businesses are confronted with evolving challenges and opportunities. As businesses strive to remain competitive, integrating Biohacking into their quality management strategies, offers new possibilities for business assessment and process improvements. Biohacking, characterized by optimizing human potential through technological and biological means, has the potential to stimulate innovation, motivation, and productivity.

The research aim is to explore the intersection between strategic thinking and quality management in the business environment, and biohacking as an alternative approach to enhancing effectiveness and adaptability in the corporate realm. Biohacking's practical application has the potential to completely transform decision-making processes, workforce well-being, and overall organizational procedures.

The study were used of content, data and comparative analysis in order to show the overall expected market growth potential for Biohacking (in terms of market size and adoption) as well as the best practices related to its introduction and utilization in the business areas such as quality management and additional strategic related practices and processes. Through the analysis of methods and practices, identifying opportunities for the implementation of wearable technologies, brain stimulation technologies, health monitoring, genetic modification, applications and others, biohacking can be strategically integrated into quality management practices to address the challenges arising from digital transformation in business.

Despite its potential advantages, biohacking presents a challenge due to the opacity of the boundary between experimentation and risk, making it difficult to determine where the boundaries between innovation and potential threat to individual and organizational health begins. The primary result of this study challenges conventional perceptions by demonstrating that biohacking is not limited to individual self-improvement but can be strategically used to



revolutionize the workplace. The combination of biohacking with quality management can be a powerful tool for enhancing competitiveness, adapting to new conditions, and achieving success in the modern business environment.

**Keywords:** *Biohacking, Technology, Quality, Management, Business*

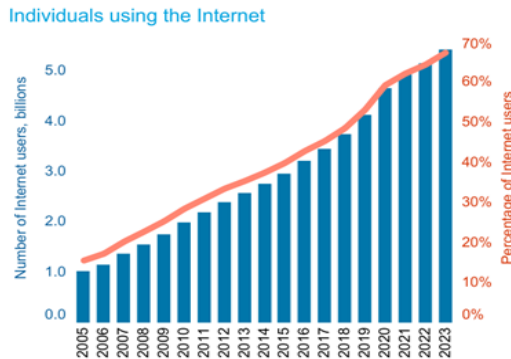
**INTRODUCTION**

In today's rapidly evolving world, the use of information technology is crucial to the success of quality management in organizations. In order to remain market competitive, companies automate a range of processes and enhance their productivity through digitization. This allows for a quicker adaptation to changing market conditions and provides access to a vast amount of information that can be analyzed and used to improve managerial decision making.

The aim of the paper is to assess the impact of biotechnologies on human behavior and the management of business processes. It offers a comprehensive overview of practical applications and strategies for the successful integration and maintenance of high-quality standards. On top of the potential and opportunities that biotechnologies reveal, emphasis will also be placed on the need for careful evaluation and management of the risks that they might pose in the work environment.

**BUSINESS MODELS IN THE ERA OF DIGITAL TRANSFORMATION**

Information technologies are developing at an exceptional pace, and user presence in the online space is growing significantly. According to the International Telecommunication Union (ITU) in 2018 1.7 billion people were surfing online. However, in 2023 a staggering increase of 45% meant that 5.4 billion people were using the internet, or in other words 67% of the global population. [1].



**Fig. 1.** *Trends of Internet Users Growth (2005-2023)*

The data from Figure 1. indicates that technology and the internet are integral parts of the modern world and will continue to transform the way we live, work, and communicate.

In the past, business models relied entirely on traditional methods, limited access to information, a linear supply chain, lack of personalization, and a small scope of influence. However, these processes are changing rapidly, impacting the way society operates and interacts within organizations. Creating or changing business models is the first step in helping organizations adapt to such changes. The introduction of new technologies, digital platforms, and evolving consumer expectations significantly influences quality control, organizational behavior, and the way people interact with technology.

In a study by Hoberg summarized in "Business Model Transformation" scientific report [2], it is revealed that approximately 90% of surveyed businesses consider digital transformation as a fundamental component of their business strategy.

Having this in mind, one can conclude that it is crucial for organizations to be flexible and innovative in adapting to these changes by integrating technology into all aspects of their business.

According to the "Digital Europe 2021-2027" report [3], projected investments of 9.2 billion euros are anticipated for digital improvement and transformation through innovative technologies.

The key areas expected to benefit from financing are Artificial Intelligence, AR/VR, Big Data, Blockchain, IoT, Robotics, Biotechnology, Nanotechnology, Micro and Nanoelectronics. Improvements, innovations, and advancements in each of these fields will have a profound impact on businesses and the workforce.

These new business models are some of the most disruptive business models of our time, developed by technology and the power of the web, such as:

1. Freemium Model (SaaS Business Model) – In this model, the basic service is provided for free, but the premium features are locked behind a paywall.
2. E-commerce model – This model involves selling physical products online.
3. Market model (equal, two-sided market) – In this digital business model, the platform connects buyers (demand) and sellers (supply) and charges a fee, membership, or other fee for each transaction.
4. Model based on usage / on demand – With that, customers pay exactly for the number of services they use.

5. Ad Supported Model (Free Model) – This model is often used by social media platforms and search engines. They offer free social networking services and use users' data to offer personalized ads.
6. Ecosystem model – A company offers a set of interconnected services that create a network effect that binds customers. They can then use the knowledge and data to upsell existing customers and acquire new customers through the vendor lock-in effect of their ecosystems.
7. Open-source framework – The software is offered at no cost, allowing anyone to modify the source code. Alternatively, the collective 'community' guarantees ongoing development of the code.
8. Model of the experience – This approach aims to elevate physical products with electronic offerings.
9. Subscription model – In this widely adopted business approach, customers contribute a recurring fee to avail a product or service.
10. Access model over ownership / sharing model – Model allows users to access goods and services for a period without owning them. This is one of the most disruptive business models because of the impact it has had on ownership and the resulting revenue you can get from a commodity.

## **PERSPECTIVES IN THE DIRECTION OF DIGITAL QUALITY-DRIVEN TECHNOLOGICAL PROGRESS: SHAPING THE FUTURE OF BUSINESS**

Continuous technological progress is redefining the boundaries of human capabilities. Biotechnologies are exerting influence on the workforce and quality management practices that are shaping the future of business.

The lines between human potential and technological advancement are blurring, giving rise to an entirely new dimension in the future of work. In this context, three innovative segments in the technological sphere - genetic modifications, technological implants, and wearable technologies - emerge as pivotal factors for enhancing human potential and work efficiency.

### **Genetic modification**

A major aspect of biotechnology is genetic modification. The report "Technological Approaches to Human Performance Enhancement" [4] mentions that genetic modification can enhance normal human conditions, as the scientific community is developing methods and techniques for performing genetic modifications in the human body.

It is possible to create genetic changes that could bestow individuals with extraordinary abilities. This advancement in genetic modifications could potentially alter the way quality management is handled in businesses.

Essential impacts can be highlighted:

- Genetic modifications can be used to direct the workforce towards more specific working conditions, such as high temperatures, high humidity, and others.
- Improved health characteristics through genetic modifications can reduce the risk of illnesses or conditions that could lead to disruptions in the production process.
- If people are genetically modified to have a stronger immune system and a lower predisposition to diseases, this could lead to a reduction in absenteeism from work due to illness and treatment.

### **Technological implants**

The work environment can be completely transformed through technological implants placed in the human body, allowing innate abilities to be enhanced. [5] An example of this is Elon Musk's company, Neuralink, which is developing a system for implanting microscopic electrodes in the brain.

According to the latest data from the global media company Forbes, the brain implant company has received "approval from an independent review board and hospital to begin its first in-human clinical trial for a chip that is implanted in one's brain to control movement" [6]. In this way, the brain-computer interface (BCI) enables monitoring of brain activity and using it to control external devices [7].

As a result, processes related to information analysis and processing can be accelerated, the time needed for decision-making can be reduced, and the way various stimuli and situations influence the human brain can be improved. By using implants, the likelihood of errors in quality management in the work process decreases. This will enable businesses to track every aspect of production with greater precision and to respond promptly in case of defects or discrepancies [8].

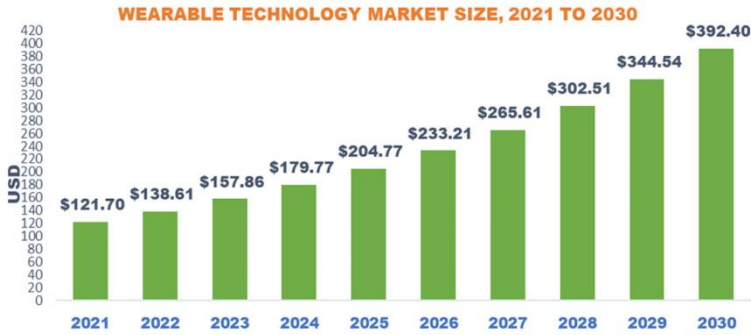
### **Implementation of wearable technologies and applications**

Wearables and innovative applications are a new type of technology in the form of portable devices. Those can function as accessories which can be used with the purpose of monitoring and enhancing productivity in work processes.

The wearable technology market is a crucial segment within the electronic devices industry, and its application in various fields of activity is on the rise. It encompasses a variety of devices such as Smart Watches, Smart Glasses, Sensors,

GPS Activity trackers, Mindfulness Tools, Heart Rate Variability Trackers, and others.

Wearable technologies can become an integral part of people's lives, as they can be utilized in the work process, tailored to personal preferences and needs.



**Fig. 2.** *Wearable Technology Market Size (2021-2030) [9]*

Forecasts indicate that the wearable technology market is expected to experience significant growth in the coming years. It is projected that between 2021 and 2030, the market will increase by a substantial 270.70 billion dollars. This reflects the immense interest and efforts invested in the development and introduction of new and improved wearable technologies.

In addition to the use of wearable technologies, cognitive development, working memory, neural mechanisms, and their activity can be influenced by Binaural Beats. The experiment conducted by Wernher Friedrich focused on the impact of frequencies associated with Binaural Beats on long-term memory. [10] Conducted among 58 individuals, it utilized a frequency of 40 Hz (in the gamma range) with the aim of examining its influence on long-term memory. Gamma waves are high-frequency brain waves associated with higher cognitive functions such as attention, working memory, and problem-solving. The results of the experiment suggest that the use of Binaural Beats at a frequency of 40 Hz may have a potentially positive influence on long-term memory.

By implementing biotechnologies, companies can enhance the quality management, focus, and concentration of their employees. It can assist in coping with stressful situations, boost energy levels, as well as improve creativity and overall well-being. Optimizing work hours and increasing productivity is another approach that companies can apply in their business processes. If employees are more productive and efficient in a shorter amount of time thanks to biohacking, workloads and stress related to prolonged work hours can be reduced.

## **ORGANIZATIONAL CHANGE AND OVERCOMING CHALLENGES**

The results of this study present new opportunities for businesses in the realm of rapid digital transformation. Integrating Biohacking into quality management strategies offers different perspectives for business assessment and process improvements. However, biological technologies also entail certain challenges and potential risks that need to be taken into account over the next few years.

The consequences of microchip implantation, for instance, may manifest in technical malfunctions, regular microchip software updates, data protection and cyber-attacks [8]. In order to address these challenges, companies should establish specialized data encryption algorithms, conduct regular security testing, and provide training for their employees, thereby preventing cyber-attacks and unauthorized access.

The wellbeing of employees subjected to biohacking will certainly become a priority for businesses. Such changes in the human body can lead to unexpected and unforeseen health consequences. Unauthorized biological manipulations may have adverse effects, potentially impacting both physical and mental health. To avoid such consequences, employees should be informed about the potential risks and benefits.

According to the “Technological approaches to human performance enhancement” report [4], the device manufacturers have the ability to retain control and rights over the device's software and monitor its functionality, including retaining access rights to the data. As a result, they may take action to deactivate the device if the user does not agree with new privacy policies and conditions. This could be viewed as a presumption of control over society, emphasizing the importance of implementing regulations and legislation that safeguard consumer rights in the digital space.

## **CONCLUSION**

Technological development requires a resilient strategy and careful regulation, especially when it comes to areas like biohacking. The work processes will experience a complete transformation, with employees and technologies collaborating closely to achieve business goals. Looking ahead, as these technologies continue to improve, it is necessary to find a stability between advancement of biological technologies and privacy, quality control and social impact.

Biohacking's potential impact goes far beyond personal development, serving as a catalyst for fundamental shifts in the workplace. When integrated with quality management, it becomes a powerful instrument for bolstering competitiveness,

navigating change, and ultimately, attaining success in today's dynamic business environment.

Despite the potential for enhancing our abilities, the question arises of safeguarding against potential control over our consciousness. Careful planning and measures need to be taken to ensure that these technologies serve as aids rather than tools for manipulating our minds.

In the coming years, significant technological progress and improvements are anticipated in this field. The steps through which biological technologies and applications will enter society will be subject to extensive discussion. Decisions aimed at minimizing potential risks are pivotal for their successful integration into the business sector.

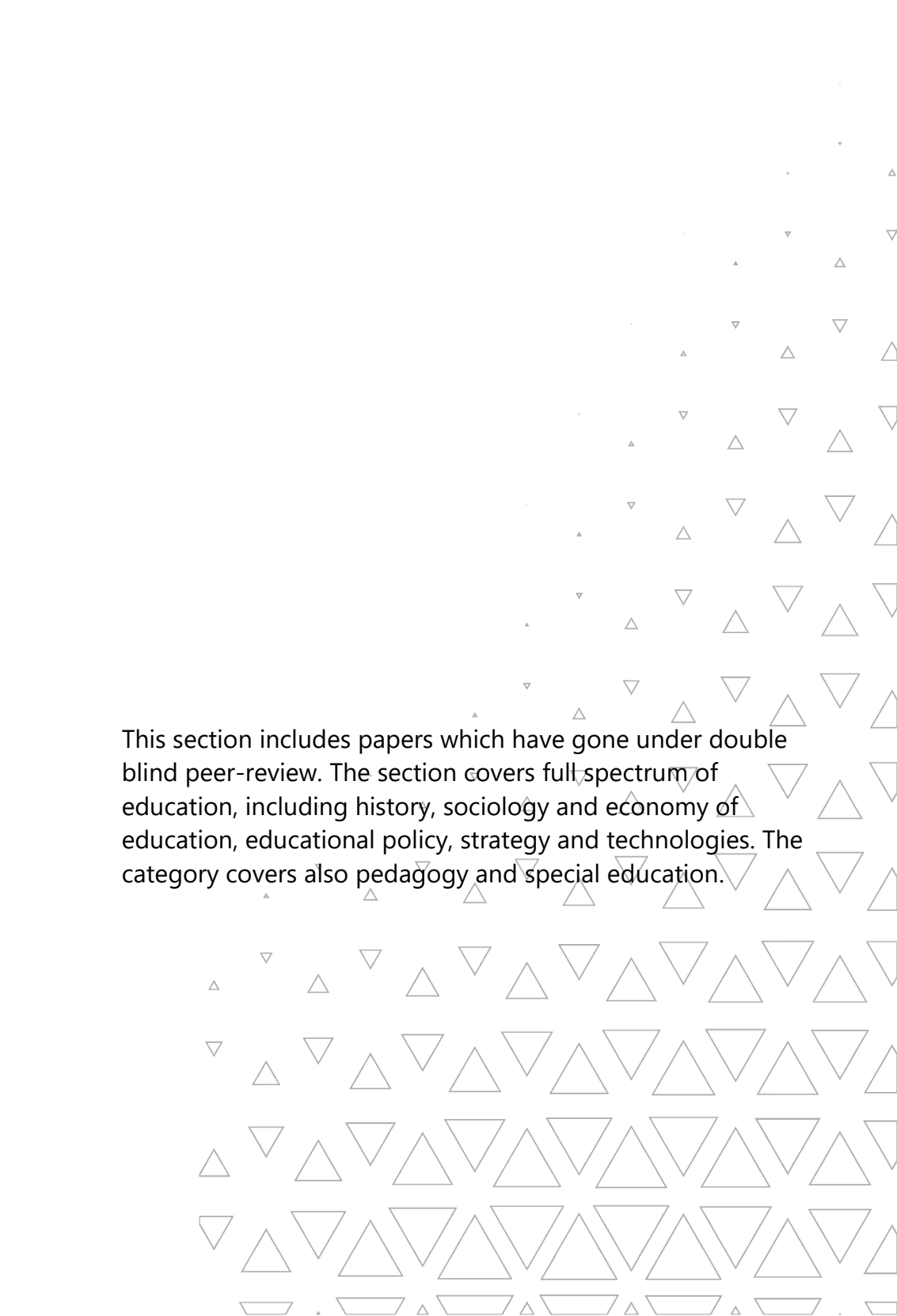
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## **Section**

# EDUCATION AND EDUCATIONAL RESEARCH





This section includes papers which have gone under double blind peer-review. The section covers full spectrum of education, including history, sociology and economy of education, educational policy, strategy and technologies. The category covers also pedagogy and special education.

# **A SYSTEMATIC LITERATURE REVIEW ON THE ROLE OF SCHOOL LEADERS IN DEVELOPING STRATEGIC PLANS FOR SCHOOL TRANSFORMATION IN TIMES OF CRISIS**

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## **ABSTRACT**

One of the most important actions that school leaders pay attention to and spend time to develop is setting a strategic plan for their school as it helps in shedding the light on the upcoming achievements and developments that their school aims to and require to achieve in a certain period of time. It is more important at this stage to think about preparing strategic plans that support the schools in times of crisis, as per the current pandemic of Covid 19 that the whole educational systems in the world got affected by and the leaders worked hard to run their schools in the best ways possible. Schools have faced a very challenging and unexpected time of ambiguity and uncertainty for more than a year now and only good leaderships were able to carry on professionally with high standards and expectations. Having a strategic plan in place that considers the unexpected scenarios is a very positive and valuable step that school leaders do to be ready to face any changes or challenges smoothly, as the role of the leadership team at these times is keen and essential for the success of the school. This paper will highlight the role of school leaders in developing a strategic plan that helps in supporting the school and its community at the times of crisis, this will be presented in a systematic literature review method that will prove the significance of working on such strategic plan and the significant role of school leaders at the uncertain times.

**Keywords:** *Times of crisis, Strategic plan, School transformation*

## **INTRODUCTION**

Background: One of the most important actions that school leaders pay attention to and spend time to develop is designing a strategic plan for their school. The attention to having a strategic plan in place at private schools has raised in the last decade, because it helps to shed the light on the upcoming achievements and developments that the school aims and requires to achieve in a certain period of time. It is even more important at this stage for schools' leaders to think about preparing strategic plans that support schools in times of crisis, as per the current pandemic of Covid 19 that the whole educational systems in the world got affected by and schools' leaders worked hard to run their schools in the best ways possible.

**Problem statement:** The current pandemic caused schools in the worlds to face a very challenging and unexpected time of ambiguity and uncertainty for more than a year, where only good leaderships were able to carry on professionally with high standards and expectations. Some schools weren't successful in handling the situation and therefore they ended up with schools' closure because of the lack of experience of finding alternative and prompt solutions. Having a strategic plan in place that considers the unexpected scenarios is a very positive and valuable step that school leaders have to do to be ready to face any changes or challenges smoothly, as the role of the leadership team at these times is keen and essential for the school success and development.

The purpose of this paper is to highlight the role of school leaders in developing a strategic plan that helps in supporting the school and its community at times of crisis and to shed the light on the importance of considering unexpected scenarios in the designed strategic plan. i.e., it is time to think and plan for what may happen not only planning for what we would like to achieve.

**Research questions:** This will be investigated through the following two research questions: 1. How efficient is the role of school's leaders in designing a transformational strategic plan that consider times of crisis? 2. To what extent do school leaders benefit from setting transformational strategic plan that supports the school at times of crisis? This will be explored through highlighting and presenting conceptual and theoretical framework in the next sections, in addition to addressing and identifying the problem as well as analysing and evaluating several theories and views relevant to the topic. The research questions will be answered through a systematic literature review analysis, followed by implications, limitations, and conclusion of the study.

**The significance of the study:** This paper can be beneficial for schools' leaders to grab their attention to how strategic plans can be very valuable in moving schools forward during the times of crisis, as it is encouraging them to plan strategically highlighting the future achievements and developments of the school as well as any changes that may occur during the school year by being reflective on the current effects of Covid 19 at schools. Also, this paper can be considered as a guideline for school leaders when designing a transformational strategic plan.

## **CONCEPTUAL FRAMEWORK**

Education field is one of the most constantly developing field, therefore; working in this field means to be up to date with are the requirements and updates that are subject to change from time to time. There are several important concepts to highlight, the first one is "Educational strategic planning" which is one of the trending terms used in education, it is the process of setting long terms objectives for the school to achieve in a certain period of time considering the future achievements and developments. It is the school big picture of the curriculum,

teaching and learning and policies. Strategic planning document directs people towards the school's needs and requirements in the future and how to fulfil them as explained by [7]. Billingham (2012) defines strategic planning as determining goals process and thinking of ways to achieve them using the suitable resources required for that process.

One other important concept to explain here is transformational leadership, which means when the school leaders have the skills to exceptionally function the school at the time that can affect the school development. This can happen through setting new goals and choosing different tasks and behaviour for different staff members to promote consistent development of the school [14].

The third essential concept is "Times of crisis" which has recently become common term after the experience of Covid 19 pandemic. Facing challenges is a common human beings' reaction for too many years ago, but these challenges is getting more difficult and serious in the present time which caused a clear risk. There is no one specific definition of a "risk" however, the use of this definition is to refer to "uncertain events" as per [1]. The global risk that has international effects is defined as the uncertain condition that when happens, can make serious and negative results on some countries for several years (The Global Risk Report) similar to what we have recently witnessed with the crise of Covid 19 so far.

## **THEORITICAL FRAMEWORK**

There are many definitions for Leadership as it is a very interesting area for research not only in education field but also in many other fields. Educational leadership can be defined as influencing and inspiring others to do their best to fulfil the organization educational goals, it also means, the consistent management and of the school's educational system [5]. There are several theories related to the educational leadership, some of them related more to the leadership roles and responsibilities in times of crisis, which is one important element of this paper, such as: the transformational, the situational and the contingency theories. The transformational theory is the collaboration between leaders and followers to make the best achievements to the school in a high level of motivation. This definition emphasises on the importance of the leader as a role model for the ones who cares about in fulfilling the school's mission and vision as well as making others aware of the mission and vision with a clear consideration of the needs and concerns of the followers, in addition to supporting them by assuring the capacity of the team in both moral and technical dimensions [4]. While situational leadership represents an unfixed style of leadership that changes as per different situations which may require to make some changes on the individuals' roles to match the current situation in a way that secures the school's development and continuity. This style forces more directive mode of leadership than a socially supportive one depending on the teachers' competency and adjustment with the situations [10]. The contingency theory matches with the situational theory as it is directed by the situation, leaders in this theory need to match the best leadership

style with certain situation and circumstances. However, this theory is not very common in education, because according to this theory, when urgency occurs, the leader may be changed to assign someone who is able to deal with the situation, or the situation needs to be engineered to match the leader's ability [10], both of these options are uncomfortable in education field and therefore, the situational and transformational theories are getting more attention in this domain and match better with this research paper.

## **METHODOLOGY**

The method will be used in this paper is a systematic literature review focusing of the importance of strategic planning, the significant role of school leaders, considering the times of crisis, school transformational process and strategic plan review process.

As per [3] Systematic literature review is a method that can be used to address and identify the problems along with critically analyzing the views, ideas and findings. This method makes possible to broadly address study questions with the potential of providing more practical implications. [12] states that the systematic literature review has seven stages to go through that are: 1. Scoping (formulating the research questions, 2. Planning (breaking down research questions into smaller components, 3. Identification, 4. Screening, 5. Eligibility (introducing eligible articles), 7. Deciding the data collection method (quantitative / qualitative) which is not applicable at this paper as there is no data collection or analysis process.

There are several of previous studies have been viewed in order to conduct this paper, however all of these studies have addressed one aspect only of my study, for example, [8] addresses only the leadership role in times of crisis, which is one important aspect of this study. However, [9] and [16] both address the significance of educational strategic planning, which is a very significant aspect of this study. The value of this paper is that it is taking into consideration both aspects broadly, trying to make it as a comprehensive solution for schools' leaders in times of change.

## **SYSTEMATIC LIERATURE REVIEW**

### **The importance of educational strategic planning for schools' development**

Strategic planning is like the institution roadmap to the future achievements by having the ideas of what can be done for the success of the school and reduce the barriers that may challenge the success. Also, strategic planning helps in being aware of the opportunities and making people more flexible and adjustable to changes, which is a very important benefit for school's leaders. And it facilitates in prioritizing the urgent and serious actions that need to be taken in order to

achieve the schools' vision as well as making staff more involved in the school's community and more committed to fulfilling the goals of the strategic plan to move the school toward its development and celebrate the school's success at the end [13]. Nowadays, education development has become a must for all schools, and to guarantee this the schools' structure and aims may get changed in response of some conditions, that changes in structures and aims may include the staff roles, the school's rules, the relationships across the school, values, beliefs and the cultural aspect [16]. Having strategic plan in place that highlights all the above points and includes the potential changes is highly important and recommended for schools for the continuous development in spite of any uncertain events that could occur. These two points shed the light on the answer to the research question by proving the benefits that school's leaders get by planning strategically, especially in times of crisis.

### **The significant role of schools' leaders in implementing strategic plans**

It is widely known and agreed that competent school's directors are able to actively and smoothly run the school with high consideration of the teachers and students' performances levels at the highest possible levels. The role of schools' leaders is crucial because they are the ones who are meant to guide teaching and learning, manage the organized activities and programs implementation [2]. At the same time, they are expected to be ready for innovative developments, individual support and development, hosting positive environment and relationships in the school, designing the school's vision and mission statement hosting core values, setting high expectations and manage the budget [9].

The schools' leaders have many incredible roles they have to do in order to lead the school toward the success, one of these roles is staff directing and management for achieving the aims and goals of the school, in addition to creating the educational policies and sharing them with the teachers to make them aware of these policies and implement them in action, also, performance evaluating and records of the work with consideration of training teachers to prepare them to meet the school's expectations and then achieve goals, and make sure the school has friendly environment across the whole school community with high recognition of the staff and students wellbeing [2].

Moreover, more of the most important roles of the schools' leaders is to motivate the staff and involve them in the school's development by sharing the strategic plan with them and highlight their roles in it, in addition of encouraging them to take part in contribution of the school's community as a whole not only to the taught subject. A large majority of leaders mentioned that making plans and applying them supported them to see the big picture for the school's future and success [2] This view makes sense because it reflects that the role of the schools' leaders is not only to design and make plans and policies, but also to deliver them to the staff and follow up on the implementation process, so they are involved in the whole process from A to Z.

It is extremely important for schools' leaders to spend some time at the start of the academic year to design the school's strategic plan, however, they may face some difficulties while doing this due to budget planning as an example or the high level of teachers turn out in the school which makes a very negative impact on the school development and the plans implementation, therefore, leaders need to be aware of the challenges and have a room for developing and solving them in while setting the targets of the strategic plan [16]. These views make a highlight on the first research question by providing some evidence that the roles of school's leaders is keen in designing and implementing a successful strategic plan in place, the school's leaders play the most important role in making this happen in action.

[6] states that schools' leaders have to go through three stages when planning an educational strategic plan:

A. Sector Analysis: in which leaders should do their diagnosis of the situation analysis by collecting the data to review the function of the current system and examine any other forces that affect the system just like socio-demographic and macro-economic situations or conditions. The aim of looking and review the mentioned sectors is to spot the weaknesses and strengths of the school in order to create an action plan and include it in the strategic plan. Also, they evaluate the efficiency, effectiveness, and the relevancy of the school's processes in addition to the inputs and outputs of the current system, which plays an important role in spotting critical challenges and issues to be taken into consideration while creating the strategic plan.

B. Policy Design: when starting the design process, there are several elements that need to be recognized, such as: the national and international contexts, the school's system requirements and the future orientations. The policy should foster the success and the coordination of the projects and programs should be accessible to the teaching staff. This includes all the educational policies in place such as: teaching and learning, inclusion, child protection and safeguarding, language, admission, and BYOD policies.

C. Action Planning: setting the main priorities and goals as well as establishing the outline of the operation at the first step of designing the strategic plan. This stage is the implementation preparation with the highlight of the strategies and tools that will be used for that. Also, this stage needs to go through negotiation and consultation procedures with the relevant and responsible members of the schools' leaders where they have to use different techniques and strategies in developing the plan.

The above divisions of the strategic planning stages support in organizing the process in order to have a smooth implementation of the policies and the plan, as it is noticed that the educational policies, action plans and strategic plan are linked to each other and all need to be in place for a successful implementation and goals achievements.

### **School transformation and strategic planning in times of crisis**

Many different factors and circumstances can affect the function of the schools at any time of the year, therefore; school's leaders are expected to always perform in a high level of leadership skills for the school development's sake to make the school able to get out from any mess that could happen by managing smooth transition in hardships. This is why the transformational leadership is keen at this stage and is an important quality of the schools' leaders [15].

Schools require consistent transformation, school's leaders should have transformational leadership skills in order to support the school in the times of crisis, having a clear vision in place is an important step for accomplishing the success of this process, because that helps in being focused on certain and determined targets and sake [15] so, as mentioned earlier, also the strategic planning needs to depend on a clear vision, this makes the school vision one of the most important elements that leaders have to consider when creating a strategic plan for school transformation in times of crisis. The clear vision is characterized by being shared and accessible to the school's members, ongoing, comprehensive, and cohesive [15].

Times of crisis can be described in many ways; it can be a health pandemic such as what happened recently because of Covid 19 virus spreading around the world. It can be a school critical financial situations due to many reasons, such as the decrease of students' numbers or other economic reasons. Any type of crises or changes need to be reacted in a timely manner to secure the school development process.

[3] states that human power of learning enables us to make the necessary changes when needed as "learning makes us human" we have the ability to change ourselves and even change the environment around us and the context's environment.

### **Strategic planning review and evaluation process**

Review and evaluation are essential stages for policies and plans improvements, the review task is done by the members of leadership team who are responsible of running activities. It is a process that is done annually not frequently, as it can take place termly or yearly for the purposes of adjustment, improvements or correcting the flow of the school's programs and activities. The focus of the review process is on the effectiveness of the strategic plan and assess the extent of the success of the implementation of the actions and the expected outcomes. It is the school's leader's role to prepare the data and the internal and external sources of information for the review process such as the annual inspection report, surveys, staff performance reports, students' progress and attainment and assessments' data analysis [6].



Evaluation is a process that follows the review as a complete examination of the operation of the school's programs, it can be done by the school's leaders as internal examiners or by other decision makers as external examiner such as the school's board or governors in order to support the school's leaders and the stakeholders to highlight the learnt lessons and refer to them for future designs with the main focus on sustainability and impact. Strategic planning evaluation process may take place at the end of the completed phase to assess instant impact or after the end of the phase or project completion for the assessment of the long-term impact of the plan and its sustainability [6].

## DISCUSSION

It is crucial to stress in the meantime on the importance of thinking in comprehensive way when it is time to design a school strategic plan, as it is equally important to consider the school transformation and times of crisis in the designed plan to come up with the best results possible in implementing the plan. It all starts from Bregman's view of the power of human to make changes and to go beyond the changes, this understanding is significant to be present and believed in by the school's leaders and stakeholders to be able to work effectively and positively in the uncertain hard times. Also, just like going through any process, some stages need to be completed before the others, therefore; Chang's stages of strategic planning are sensible as he started to make the highlight from the very beginning of the process and from the outside to the inside. However; some useful details are missing such as examples of the types of strategic plans and or some suggestions of the best design, in this regard the "SWOT" analysis should be mentioned as the most common type of strategic planning and action planning that schools' leaders are currently use, it is a tool of analysis matrix that consider the strengths, weaknesses, opportunities and the threats of the school, this tool helps the school's leaders to build the strategic plan to fulfil the determined goals and improve the programs implementation [14]. This tool is relevant because the times of crisis can be highlighted under the "threats" element so, the strategic plan will be addressing scenarios of unexpected changes. Another common tool is "VMOSA" Vision, Mission, Objectives, Strategies and Action Plans, which covers most of the areas of the strategic planning and it is a helpful tool to support the leaders to remain organized and define the school's vision and bring out the needed changes practically [11]. However, there is no one way or certain best method to follow to design a successful strategic plan, it is flexible and may take any form but should include all the elements and go through all the stages. The keys of the strategic plan success are summarized in three points; firstly: getting everyone on the same direction, because having misunderstandings of what the strategic plan includes and focuses on hinder the process of quality planning, for that, sharing the approach is essential at early stage. Secondly: Collaborative work is needed and urgent for raising ideas and developing them to action the plan. Thirdly: engaging the community in the planning process leads to having a successful, meaningful, and supported strategic plan by considering the thoughts of all people that matter [11]. Nevertheless, considering the unexpected

scenarios and changes is an essential key that needs to be added to Porter's keys of strategic planning success.

## **IMPLICATION AND LIMITATION**

This study is directed to the school's leaders to get their thoughts toward creating strategic planning that support them to run the school in times of crises as it is providing them clear stages and elements to be recognized when designing the plan. Strategic planning is a keen requirement at schools nowadays, especially after the pandemic of Covid 19 and all the effects on the education systems. If the schools' leaders have not yet started to plan strategically so far, they must start right away and they need to consider the requirements of the school's transformation in the times of crisis in the created strategic plan.

Although there are some guidelines to follow to design a successful transformational strategic plan, there are some limitation in implementing it such as; meeting the high expectations of the schools' owners and governors can be challenging, because of the timeline that can be set to fulfil the outcomes of the strategic plan and sometimes the flexibility of the staff to deal with urgent changes, so, transformational and situational leadership modes have to be applied in action at the times of crisis.

## **CONCLUSION**

The conclusion of the article underscores the critical importance of a well-structured and adaptable strategic plan in the effective leadership of educational institutions during times of crisis. This assertion reflects the core premise that educational organizations must engage in ongoing development and improvement to meet the dynamic and evolving needs of their students and the broader educational landscape.

In the realm of educational leadership, the development and execution of a clear, effective, and meticulously crafted strategic plan constitutes a fundamental imperative. This plan serves as an indispensable navigational tool, delineating a path of purpose and direction that all stakeholders within the institution can align themselves with.

Furthermore, astute educational leadership necessitates a forward-thinking approach that goes beyond immediate concerns and takes into account the potentiality of crises that might culminate in school closures or disruptive events. By proactively considering these contingencies, leaders can develop strategies that not only address the exigencies of the moment but also contribute to the long-term resilience and sustainability of the institution.

The strategic planning process must be approached with due diligence and a collaborative ethos. This entails the active engagement of diverse stakeholders,

including educators, support staff, parents, and the broader community. Such inclusive participation ensures that a multifaceted array of perspectives is brought to bear in the formulation of the strategic plan, thereby enhancing its comprehensiveness and efficacy.

In addition to a meticulous design, the implementation of the strategic plan must traverse well-defined stages. A methodical and systematic approach ensures that each component of the plan is executed with precision and efficiency, thus fostering its successful realization.

Effective leadership also hinges on the critical facet of communication. Educational leaders bear the onus of not only conveying the strategic plan comprehensively but also ensuring that it is unequivocally comprehended by all members of the teaching staff. The articulation of roles and responsibilities within the plan is of paramount importance, as it bolsters clarity and unity of purpose.

Sustaining the trajectory of the strategic plan entails an ongoing regimen of monitoring and evaluation. This iterative process serves as the fulcrum upon which progress is assessed, deficiencies are identified, and requisite adjustments are made to maintain alignment with the plan's objectives.

Lastly, an indispensable aspect of educational leadership is the ability to adapt and evolve in response to changing circumstances. Following the review process, a meticulous internal or external evaluation is undertaken. This evaluative endeavor furnishes invaluable insights that underpin the refinement and adaptation of the strategic plan to fortify the institution's readiness for prospective challenges and opportunities.

In summation, the core assertion of the article underscores the imperative for educational leaders to embody foresight, collaboration, and strategic acumen. By adhering to a meticulously structured strategic plan that exhibits adaptability in times of crisis, leaders can adroitly steer their educational institutions toward a trajectory of continuous development, ensuring that they remain robust and effective in both customary and challenging circumstances.

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# **BULGARIAN TEACHERS AND THE DIGITIZATION OF EDUCATION**

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## **ABSTRACT**

The digital transformation of traditional education leads to a change in the classical idea of the content and structure of the teacher's professional competence. The ability of teachers to teach with high quality is undoubtedly a key and very significant part of it, but in the conditions of the dynamic change of the environment – both in the real classroom and also in the increasingly used virtual one, it changes dynamically and develops with the help of new funding. The last three years, after March 2020, have created favorable conditions for enriching the pedagogical competence of teachers with a set of digital tools. Digitization has led to the enrichment of the technological toolkit of Bulgarian teachers with online-based educational resources, but also with authored exercises, assignments, tests, products and programs for gathering information about knowledge and opinions.

The paper presents the results of three of the authors' empirical studies conducted in 2018, 2020 and 2022, and related to the use of electronic resources for educational purposes.

**Keywords:** *teachers, education, digitization*

## **INTRODUCTION**

The teaching profession is ancient one of the oldest, but the interest in it is currently associated with the awareness of society of the role of the teacher in the formation of the value system and cognitive culture of the younger generation in conditions of rapid change of the social and especially technological environment. New demands are being made to the teacher, there are new expectations, and the extent to which the teacher can satisfy them depends on a number of objective and subjective factors. According to the author, teachers' ability to teach with high quality is the core of teachers' professional competence [7], but in the conditions of accelerated digitalization of education it needs to be enriched and conceptualized in terms of the process and outcome of educational activities with students.

### **Preparing teachers to implement the digitalization of education**

The quality of a teacher's work is directly dependent on a number of prerequisites, among which the following are the leading ones: the personal

characteristics related to the suitability to exercise this profession; his basic professional-pedagogical training received at the university; the motivation for work and, last but not least, the continuous professional development. The problems of teacher training and qualification are the focus of both academia and the general public, because in reality this concerns parents, pupils, employers and other social partners and institutions.

It is for these reasons that it is necessary to analyse expectations about the nature of teachers' professional-pedagogical competence. An attempt at structuring according to the author includes: "1. Knowledge of the field of science from the bosom of which the subject to be taught is constructed. 2. Psychological knowledge and skills to work with the age category of students. 3. Knowledge of pedagogical sciences and educational technology, and methodological skills. 4. Communication competence to implement an effective educational process in the classroom. 5. Managerial competence to manage the environment and its participants" [6].

This model is based on the understanding that professional preparation is fundamental for the formation of professional competence is also enriched from the positions of the competence approach, described in the regulations on the preparation process [4] and on the qualification [5].

Special attention in both legislative acts is paid to the training and qualification of teachers for the use of information and communication technologies in the educational process. In the list of compulsory subjects under the Regulation on the State requirements for the acquisition of professional qualification as a teacher, a new compulsory subject "Information and communication technologies in education and work in a digital environment" replaced "Audio-visual and information technologies in education". However, the following questions arise: Who teaches these courses and what is the curriculum? What hardware and software are the student teachers working with? Given academic autonomy, it is possible to have a huge variety both in terms of the content of the curricula and their practical implementation in the teaching process. As a result, teachers trained at different universities may have a different sets of knowledge, skills and competences for working with digital educational resources.

There are problems related to the model for the preparation of future teachers in universities, which, despite the normative framework, is not unified in terms of content. Also the teachers themselves have different levels of digital competence. To address these issues, the National Programme "Improving the competences of teachers in public higher education institutions preparing future teachers" is being implemented. Teachers are trained in two directions - digitalization through ICT-based innovative educational technologies and application of competency-based approach.

## **Qualification of teachers in digital technologies used for educational purposes**

The issue of teacher qualification has acquired new dimensions since the adoption of the Law on Pre-school and School Education and its specification in the Regulation on the Status and Professional Development of Teachers, Principals and Other Educational Professionals. Serious competition has emerged on the education market between universities training teachers on the one hand and commercial companies and NGOs offering continuous professional development training courses to teachers on the other. The latter two (for-profit and non-profit legal entities) go through a procedure for approval of programmes by the Ministry of Education and Science and registration in the Information Register, while universities can only teach on the basis of programme accreditation in higher education field 1. Pedagogical Sciences.

This has led to the offering of a huge amount of subjects, courses, programmes and subsequently to the "overqualification" of teachers. In the Information Register of the Ministry of Education as of September 2023, there are nearly 5200 approved subjects, among which those related to the application of information and communication technologies, digital resources and online learning are over 1000.

Against the background of the huge supply, there is a worrying lack of connection with teachers' interests and subsequent formal participation, for which there is publicly available information. The choice of topics for qualification courses is directly linked to the management style of the principal, the organisational culture, the type and size of the school/kindergarten, the location and a range of other factors.

There is a lack of relevance to appraisal, but there is also insufficient relation to the students' evaluation of the change in teachers' performance as a result of the new knowledge, skills and competencies they have acquired following participation in various training courses.

The latter factors and phenomena have been investigated in a nationally representative study conducted in 2019 by a team from the Faculty of Education at Sofia University "Sv. Kliment Ohridski" with 1002 high school teachers. It was found that 50% of the teachers indicated that they had participated in training on. As a result, 45% considered that they had developed their skills in integrating ICT in teaching to a very high and high degree; to a medium degree – 35% and to a low and very low degree – 14% and not developed – 5%. ... 60% of their students think that their teachers present the learning material clearly, including using ICT, but only 52% think that they present the learning content in an interesting way using ICT, 25% could not judge, and just over 22% did not think so [3].

The results show that in 2019, only half of the teachers have participated in training to enrich the pedagogical toolkit with digital competencies and nearly 80% of them report a development that is also noticed and appreciated by slightly more than half of their students.

### **Teachers' self-assessments of the use of electronic resources for educational purposes**

In order to diagnose the digital competences of Bulgarian teachers, we conducted a series of empirical surveys with different tools in the period from the end of 2018 to mid – 2022.

The first study aims to investigate teachers' use of online-based educational resources in the process of preparing and delivering lesson work. It was conducted between November and December 2018 using a questionnaire distributed on paper. It involved 240 teachers, from all over the country, who were included in qualification courses on various topics, conducted within the framework of the project BG05M2OP001-2.010-0001 "Qualification for Professional Development of Pedagogical Specialists" of the Ministry of Education and Science, funded by the Operational Programme "Science and Education for Smart Growth" 2014-2020.

The first question in the study is related to participation in courses on the use of electronic resources for educational purposes. It was established that "64% participated ... , and the remaining 36% did not. However, the data show that those in the second group also use the resources with the same frequency and there are virtually no major differences in the results shown by the two groups – trained and non-trained" [8].

Teachers then answered questions about their access to online-based educational resources, including dictionaries, reference books, libraries, blogs, platforms, game and exercise software, tutorials, Wikis, presentations, social networks, etc. Responses include information on the frequency with which teachers use these resources in preparing for and delivering lessons.

The results show that teachers use presentations and videos most frequently in their lesson work and less frequently software for skill formation and assessment purposes. They visualize well in teaching, but still not all of them do. The majority are users and fewer are creators of e-learning resources, apart from presentations, which almost all do. The culture of sharing is still at a low level and they do not know well the possibilities of combining multimedia products to increase the quality of the learning process. Social networks are the most commonly used sources of electronic resources for educational purposes, with Wikipedia and Wiki type resources coming in second [8].

The second study was conducted in April 2020 to investigate pedagogical communication in distance education in emergency conditions. The participants



in this online survey were 1345 educational professionals working in different types and kinds of schools, mainly women (95%) from all over Bulgaria.

Again, teachers were asked if they had participated in qualification courses for working with online-based educational resources. This time it was found that 55% had participated, with 21% having done so as part of an in-school qualification and 34% as part of so-called external training for the award of qualification credits.

The second significant issue regarding digital competences relates to their prior preparation for using online platforms or programs that they had to start working with after schools close in mid-March 2020. Only 14% had preparation thanks to participation in qualification courses; 10% because the school they work in has one and another 10% because they worked with platforms within projects. The remaining 66% had no prior training. This probably explains the stress and the great difficulties that Bulgarian teachers faced in the initial period of the introduction of distance learning in an electronic environment due to the closures that resulted from the measures related to the COVID-19 pandemic. It is worth noting that they have dealt with this challenge quickly and by the beginning of April 2020 they have already found many opportunities to carry out virtual pedagogical communication, to present the learning content and to assign independent and homework work. This has been realised through the use of a wide range of educational websites and portals providing educational resources, most often structured by subject and/or topic; videoconferencing and two-way communication platforms; programs for creating educational resources – video, text and other multimedia materials; programs for creating tests and other materials for assessment purposes.

Bulgarian teachers are very quickly changing from users to creators of digital resources. 841 indicated that they create their own tests, worksheets, exercises, etc., 862 use e-textbooks, but 1190 combine e-learning resources created by them with those found on the Internet [9].

Based on the analysis of the results of this study, it can be concluded that the majority of teachers exhibit high levels of professional competence and through own initiative and creativity find, select and use online-based educational resources to adapt learning that is conducted in an electronic environment in order to maintain its effectiveness.

The third survey was conducted online between April and June 2022 and the total number of participants was 800, of which 339 were educational professionals working in kindergartens and 461 working in schools, of which 44% (201) were in primary classes (I-IV), 29% (134) in secondary (V-VII) and 27% (126) in high school (VIII-XII).

Among the main objectives was to investigate the extent to which the closure of educational institutions and the frequent replacement of face-to-face learning with online affected their use of digital technologies and online-based educational resources.

In the context of this analysis, the answers to two questions are noteworthy: How would you define your digital competences for working with online-based educational resources now compared to their level two years ago? and How would you define your skills for creating digital educational resources now compared to their level two years ago?

For teachers from kindergartens, it was found that 31% felt that their digital competencies had improved significantly and 53% felt that they had improved, making a total of 84% of those who took part in the survey. This allows to conclude that they have enriched their didactic toolkit with new digital tools, methods and technologies.

About in-school teachers, the self-assessment shows that according to 41% their digital competences have improved significantly and according to 54% of respondents these skills have improved. The cumulative percentage is 95, which is 11% more than kindergarten teachers. This is explainable in terms of the different educational content load and the higher demands on distance learning conducted in an electronic environment. Online learning over the two years (2020-2022) leads to a significant improvement, which is the result of training as well as self and peer learning within in-school qualifications.

For the second question, there are also marked differences between the two groups of teachers. 24% of respondents (80 people) said there had been no change in their skills, but 53% reported an improvement in their ability to create digital resources. The remaining 23% were confident that there had been a significant improvement. Again, it is possible to sum up those reporting improvement to a total of 76%, three quarters of all participants.

For school teachers, 33% self-assessed that their skills had improved significantly, 56% thought they had improved and 11% thought there had been no change. 89% reported an improvement, which is again higher compared to child teachers [10].

The results of the self-assessment show the development and enrichment of Bulgarian teachers with skills to find, use and create digital educational resources.

## CONCLUSION

The teaching profession is undergoing a major transformation in terms of key professional competencies on the one hand; but on the other hand, there are

changes in public opinion/attitudes towards it. In terms of professional competences, the inclusion of digital is no longer questionable or objectionable.

Digital competences "are among the eight core competences and refer to criticality and confidence in using the full range of digital technologies for information, communication and basic problem solving in all aspects of life." [1]. In terms of teachers, they are interpreted in "six areas of development, including professional environment; creating and sharing digital resources; managing the application of digital tools; assessment; empowering learners and improving their digital competencies." [2]

Serious questions remain about the quality of preparation of prospective university teachers in the compulsory subject of "Information and Communication Technologies in Teaching and Working in Digital Environments" and about the choice or otherwise of the two electives proposed in the Regulation on the state requirements for the acquisition of professional qualification "teacher".

The results of the three surveys conducted in 2018, 2020 and 2022 allow to draw the general conclusion that the closure of educational institutions – schools for a longer period of time and kindergartens for a shorter one due to the COVID-19 pandemic stimulates Bulgarian teachers to implement at a very fast pace a digital "revolution", which for a part of them was stressful and difficult due to the lack of prior preparation. The conclusion is that the results of digitalisation at secondary level have been satisfactory.

The enrichment of digital competences in terms of the use of online-based educational resources and, more importantly, the acquisition and improvement of self-development skills are key to increasing children's and students' motivation to learn. More generally, this contributes to improving the quality and outcomes of the educational process with the digital generations that are within the scope of the Bulgarian education system.

It remains a debatable question to what extent these skills will continue to develop and whether they will have sustainability as a basis for continuous improvement towards the new demands of the social and technological environment. It is also an open question as to the expectations of digital competences of teachers from students, their parents, employers and last but not least the public institutions that invest in education.

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# **DIGITAL SOLUTIONS OF COLLECTIVE MUSIC EXPERIENCE FOR THE IMPROVEMENT OF TEACHERS' PROFESSIONAL QUALIFICATION**

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## **ABSTRACT**

Music plays a very important role in student development, it can help them acquire the skills for expressing their opinion and critical assessment of the world as well as foster their self-confidence and learning motivation. It is extremely important to promote the formation of collective musical experience through a creative process that simultaneously develops their instrument playing, socialization and cooperation skills.

Ensuring the process of collective music playing is closely related to the competence and digital literacy of the group leader - teacher. This is particularly important in the context of overcoming the constraints of the crisis since the beginning of 2020.

Due to the fast spread of the COVID-19 pandemic many countries adopted restrictive containment measures limiting assembling in public spaces and introduced social distancing. Amateur culture groups virtually ceased their creative activities. The measures equally affected the groups formed within the framework of the study process in music schools, as well as in universities and interest education groups. This gave rise to the need to study the consequences of the restrictions for musical groups and their participants.

The authors of the study surveyed general education music teachers and teachers of schools majoring in music in Latvia, as well as managers of musical groups asking questions regarding the digital solutions in distance learning. The analysis of the acquired data showed the willingness of the teachers to overcome the crisis and necessity to do so. However, providing distance learning required great effort from the teachers who have worked at their respective schools for many years. The analysis of the questionnaire data showed the necessity for improving professional skills in applying digital tools in the education process. This means that the improvement of digital skills correlates with the continuity of culture studies in musical education which include collective music playing.

**Keywords:** *teachers' professional qualification, collective music experience, digital solutions*

## INTRODUCTION

Latvia stands out among the European states and takes pride in the fact that in the field of music education – despite the rapid social economic changes, affecting the state during the recent decades it has managed to retain its professional and professionally oriented musical education.

At the moment there are 9 professional and 117 professionally oriented music schools [17].

The importance of this type of education in development of professional musicians and music teachers is beyond any doubt, but this importance is the greatest in the sphere of preservation and development of the culture life values in Latvia, through the development of educated music lovers – people who love music and have interest in it, who go to concerts and consider music making in amateur groups an integral part of their lives. Thus the main task of the teachers – leaders of the collective music making groups at an education institution – is to increase the motivation of the students to become involved in music [14]; [27]. Nowadays it is becoming increasingly more difficult to complete the task, as the social changes and the consequences of the pandemic of 2020 – 2021 (distance learning and teaching, crisis in multiple spheres, etc.) also change the value orientation of the modern students, the range of their needs and interests is growing and diversifying, and with it also the sphere of motivation is changing. Presently also the opportunities of the state support for the professional and professionally oriented music education are reduced [11].

The music in education plays an extremely important role in comprehensive development of the students, it can help them acquire skills necessary in order to express their opinions, perform a critical evaluation of their surroundings, but also be more self-assured and motivated. It is especially important to promote the formation of the collective musical experience of the students via creative activity, both developing new and improving the existing musical skills and competences, personality development processes, and also the socialising and collaborative skills [1]; [8]. The professional formation of the collective music-making experience via creative activity of the students is not possible, when the activity is not guided and supervised by a person competent, creative and full of initiative, that is the group leader – teacher.

An integral part of the music-making process is the creation it being the main aim for the development of a creative personality. One of the teaching tasks is to support and promote interest in diverse types of musical activities [5].

Such an interest can only be aroused in the students by a teacher, who himself is interested in development of his or her competencies and qualifications, someone who can use one's own experience to enrich the learning and life experience of the youngsters.

## METHODS AND MATERIALS

In the context of research into the topic “Digital solutions of collective music experience for the improvement of teachers' professional qualification” a study was done on the ideas expressed by experts in the fields of psychology, pedagogy in general and music pedagogy in particular, while the further research included a survey of the group leaders - teachers regarding the opportunities for organisation of collective music-making within the distance learning process, and the digital competencies of the teachers.

In order to understand the topicality of the approach, it is necessary to establish not only the applicability of the digital solutions in the study process, along with the opportunities for teachers to improve their professional skills and competencies, but it is also vitally important to explain the role of the collective music-making in culture education and constant improvement of the students' skills.

Study of development and interaction of different musical cultures is of importance for the artistic practice and research of music [28]. In our day, thanks to unlimited potential of technologies, the achievements of national music culture of different nations have become readily accessible. The study of these achievements also plays an important role for handing down the tradition to the next generations

In order for the culture process to develop further, notwithstanding different possible crises in the future, it is necessary not only to understand the potential created by the new technologies, but also use those in teaching work for provision of culture education.

The existence of national music culture is dependent upon activities of multiple generations of the particular nation in the field of creation and performance of musical compositions, for handing down and preservation of the musical experience [29]. Such characterisation of national music culture indicates that the explanation of its structure can be found within its system of social organisation, with its culture specific traditions, within which particular artistic experience is formed, including that of collective music-making.

The national tradition of collective music-making in Latvia is reflected in the General Latvian Song and Dance Festival, along with the Song and Dance Festival of Latvia's School Youth, where amateur choirs, vocal ensembles, and diverse instrumental groups and orchestras take place, with the dance groups participating in large joint concerts.

The process of collective music-making helps in achieving the most diverse positive results, understanding of that is reflected in different political documents [7]; [25]; [24]. It has also been acknowledged in a substantial number of studies

[26]; [12]. Participation in music groups, orchestras, choirs is of special importance for development of social skills and formation of united groups. Such a view is also supported by academic research, revealing the fact that the music-making process when organised in groups, promotes social unification, well-being and acquisition of social skills [3]; [20]; [23]; [15]; [12]. Creation of music exerts positive influence on prosociality, it promotes collaboration and prosocial behaviour within the group [13]; [18]; [21]. Thus musical activities become an effective field of activities, they create positive collective experience for many people, creating both a link between the performers and an intuitive feeling of community. Thus collective music-making not only creates a higher level of coordination in comparison to other non-musical group's activities, but also urges to reflect a common aim, strengthening the feeling of joint action of the group's members [15]. It is believed that joint music-making diminishes bias towards foreigners, as the language of music can be comprehensible and easily understood, also easily recognised, and music as such is international [22].

The aspects of cultural participation provide an opportunity for participation in the process of creation of music and art, promoting the research of aesthetics of music, thus helping the youths to take part in musical artistic processes. Teachers of music can position participatory culture both as an aim, and a means so as to use interpretation of music in order to urge the youths to think and act imaginatively [9]; [10]. This means to provide help to the students in development of their skills and comprehension for participation in culture involvement, and also to urge the youth to engage in the study of issues of aesthetic, ethical and sociocultural nature, this being an important aspect of teaching and learning. Thus the collective music-making realizes this handing down of experience, promoting the continuity of tradition inheritance, function of teaching and learning, and that of unification of a social collective body [2].

For the leader of collective music-making – the teacher it is important to possess not only the skill of music-making, knowledge of peculiarities of music-making, but also to possess the skills necessary for teaching this music-making, facilitating the students' task of learning it. It is necessary to be able to see the meaning of diverse methodological techniques, the purposefulness of their use under different circumstances. The teacher must find pedagogical and musical ideas useable in the practical work. Thus the teacher must possess some specific knowledge of both the practical and methodological, and theoretical issue of one's profession. This understanding of the aforementioned necessity is the basis of both the system of teacher education and that of their further skill development. Any teacher must develop oneself as a rich cultural personality. This process never stops [27].

The regulation Nr. 569 of the Cabinet of Ministers of Republic of Latvia (enters into force 14.08.2018.) states that teachers of general, professional and non-formal education are responsible for the improvement and development of



their professional competence. The professional competence is improved by studying a programme of at least 36 hours within a period of three years [19].

The crisis situation created by the pandemic urges the teachers to not only get acquainted with new study content and methods, but even more emphasises the necessity to acquire and develop the digital skills necessary for implementation of the distance collective music-making activities. With the digital age in full swing and new technologies constantly appearing, along with new mass media, it is important for the teachers to create a link between the social media, participation culture and the participants to the collective music making [6]. With it learning of the digital technologies by music teachers gains special importance, aiming to use the knowledge in culture education, constantly promoting the handing down of both the traditions and values of world culture, along with experience of collective music-making to the next generations.

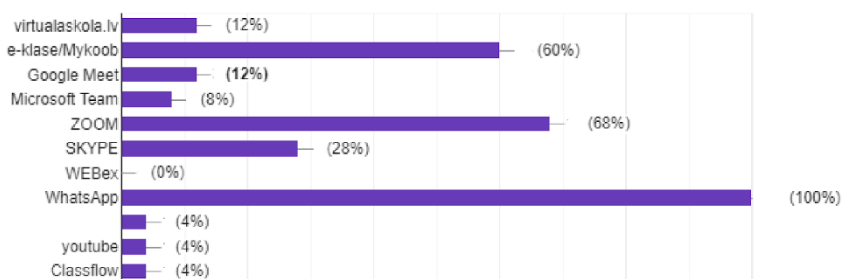
## **DISCUSSION AND RESULTS**

With the rapid spread of the COVID – 19 pandemic in the world in the first half of 2020 and the even worse situation in autumn, the governments of most countries made decisions limiting socialising, accepting the principles of social distancing. Due to the Covid-19 crisis in Latvia, not only all of the public culture events and festivals were cancelled – also the School Youth Song and Dance Festival planned and prepared for years was postponed. In spring 2020 all rehearsals of both amateur and professional art groups was suspended for 3 months. It has not been restarted fully even now – in mid-2021 [4].

The education process moved to the distance or online mode, but the culture process was not up to the challenge. The culture groups stopped their creative process. This process of artistic activity was also stopped for the groups involved in provision of education both at music schools and higher education institutions, and non-formal education alike [16].

The authors of the present study performed a survey among the music teachers of Latvia's general education institutions, professional music oriented education institutions and leaders of performing groups regarding the use of digital solutions in conducting distance music lessons.

Nearly 82% of the teachers and group leaders participating in the survey did not see any opportunity to work with the participants of collective music-making individually. At the same time 80% of the respondents expressed willingness to acquire additional knowledge in the field of ICT. Within the framework of the present study the available information on the use of digital solutions in the music educations study process was researched in detail (Microsoft Teams, ZOOM, Skype, WEBex, etc.) in both the general education and music professional orientation education programmes.



**Fig. 1.** Digital solutions in the music educations study process.

For data processing the IBM SPSS Statistics 22 software was used. In order to perform the quantitative data processing, the credibility factor was calculated first. The appropriateness of the questionnaire (*Reliability analysis*), using the Cronbach alpha test, showed the factor of  $\alpha = 0,587$ . In order to establish the manifestation level of the actions by the teachers involved in the survey and to find the reserves not yet used, using the calculations of descriptive statistics the general mean values were found. The calculations show that the highest mean value  $m = 3,84$  is that of the variable corresponding to the question: *Has your work-load increased or decreased because of the COVID – 19 pandemic-related restrictions?* Most of the teachers (92%) explain the increase in their workload with the need to prepare the various teaching materials for the lessons, additional explanations to be provided to the students, overcoming technology-related obstacles. At the same time some teachers mention that that their workload has decreased (the collective music-making activities cannot be organised in the distanced fashion) or stayed on the previous level. On the other hand, the lowest general mean level was registered for the variable corresponding to the question: *Did you take the opportunity to take part in local or international scale music projects or events during the state of emergency?*  $m = 1,68$ . Most of the teachers had not taken part in such music projects, explaining the fact with lack of information, as well as the excessive workload performing their teaching duties. Still some teachers had not only found the ways necessary to prepare their students, but also participated in contests with them.

Prior to performing the correlation calculations, the data distribution check was performed, using Kolmogorov – Smirnov test. It was found that the data are spread non-parametrically, and in further calculation of correlations the Spearman test was used.

The calculations show that a very tight correlation is between the variables corresponding to the survey questions: *What digital solutions did you use in your distance teaching activities?* and *Did you take the opportunity to take part in local or international scale music projects or events during the state of emergency?*  $r_s = 0,410$ . Besides close interrelations were found between the variable

corresponding to the question: *Do you consider an option, when working with a group, to organise the music-making process remotely?* with the following

- Which digital solutions did you use in your distance teaching work?  $r_s = 0,265$ ;
- Did you manage to perform a successful transition to distance study process after the introduction of the state of emergency?  $r_s = 0,311$ ;
- Has your work-load increased or decreased because of the COVID – 19 pandemic-related restrictions?  $r_s = 0,337$ .

The teachers who were not actively using some digital solutions were less interested in participation in diverse online projects and events. Thus the teachers who convincingly employ digital solutions for provision of distance study process, review different opportunities for overcoming the restrictions caused by the pandemic, in order to continue the group's activities. The analysis of the acquired data showed the willingness and necessity of the teachers to overcome the crisis, notwithstanding the problems related to 1) network bandwidth and quality of the connection, 2) the incomplete range of technological means available at education institutions, 3) lack of ICT knowledge and skills for the teachers' own work.

The analysis of the questionnaire data showed the necessity for improvement of the professional skills in application of digital tools in the education process. This improvement of digital skills correlates with the continuity of culture studies in musical education. The improvement of digital skills provides opportunities to conduct interdisciplinary lessons, integrating them into the study process. Organisation of study process with the help of technologies aids the creation of interactive study content. The teachers especially emphasised the need for the improvement of the teachers' digital expertise in the digital environment aimed at study management solutions and the use of integrated cloud services. The advancement of digital expertise would create an inter-relationship with the principles of positive education in the digital age, also substantially decreasing the risk of professional burn-out for teachers.

## CONCLUSIONS

Currently the music teachers are in need of further education courses providing them with information on the new technologies, digital solutions, as well as the application of online music programs.

It is necessary to integrate the learning of the basics of digital technologies into the study process of music pedagogy.

The support of the sector's management, the municipalities and the management of the particular educational institution for wider use of digital technologies in the education process and the availability of the respective

software for general and vocational education, non-formal education, as well as for the cultural process of amateur groups would be of very great importance.

As a result of the research, it was concluded that with the increasing teacher workload, the risk of burnout of teachers is increasing; this requires another specific in-depth research into this direction, especially linking it to the development of teachers' digital skills.

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# INTEGRATING GAME JAMS INTO THE EDUCATIONAL PROCESS: FOSTERING LEARNING AND SOFT SKILLS THROUGH DIVERSE APPROACHES

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## ABSTRACT

Game jams, previously unexplored in education, involve interdisciplinary teams developing game prototypes rapidly. These events promote collaboration, diverse game development experiences, and innovative design. This paper examines game jams' educational potential, highlighting their role in cultivating technical prowess and vital soft skills like creativity, teamwork, and adaptability. Integrating game jams into higher education can be achieved through various methods, ensuring alignment with learning goals for enhanced subject comprehension and innovative thinking. Through case studies, this paper showcases how game jams, whether individual or team-based, effectively foster essential competencies, preparing students for the dynamic world of creative and tech industries.

**Keywords:** *21<sup>st</sup> century skills, education, game jams, innovative learning, soft skills*

## INTRODUCTION

Based on a thorough analysis of current literature and drawing upon extensive personal experience in organizing and coordinating game jams, this article defines a game jam, as articulated by A. Kultima, as an accelerated and opportunistic event. Within a relatively brief timeframe, participants engage in the collaborative creation of a video game, exploring prescribed design constraints. Subsequently, the final outcomes of these events are disseminated to the public.[7]

Game jams are versatile occurrences that can manifest in both formal and informal settings, accommodating a wide range of scales, from local to regional, national, and even international levels. One of the most globally renowned instances is the Global Game Jam (GGJ), which has been an integral part of the game development landscape since its inception in 2009. The GGJ, characterized by a series of interconnected local jams held concurrently worldwide, has consistently attracted a substantial and diverse participant base. The Global Game Jam continues to demonstrate remarkable growth and global participation and hosted an impressive 40,000 registered participants hailing from 108 different countries creating 7,637 games. Notably, this figure marked the inclusion of

Slovakia for the first time, emphasizing the event's expanding reach and inclusivity.

Building upon the discussion of game jams, it is imperative to mention another notable event in the realm of game development and rapid prototyping, namely, the Game Jam Plus (GJP). GJP represents an innovative extension of traditional game jams, introducing additional elements and complexities to the game development process.[5]

As of 2023, Game Jam Plus has gained prominence as a platform that challenges participants to address not only prescribed design constraints but also a broader array of societal, environmental, or technological themes. This distinctive feature encourages developers to explore and address pressing real-world issues through their game creations. Game Jam Plus events are frequently organized at various scales, mirroring the global spread of traditional game jams.[5] The GJP events have garnered significant attention for their ability to foster creativity, problem-solving skills, and a sense of social responsibility among participants. By infusing elements of social impact and sustainability into game development, GJP aligns itself with contemporary concerns and engages the gaming community in meaningful dialogue and innovation and represents an exciting evolution of the traditional game jam concept, blending the rapid and creative development of video games with a heightened emphasis on addressing societal challenges and promoting positive change.

It is pertinent to highlight that a significant proportion of games conceived during such game jams retain their originality and creativity, often serving as precursors for the development of independent video games (Indie games). These Indie games are highly esteemed within the gaming industry for the novel and innovative concepts they introduce, underscoring the enduring influence and creative potential of game jams in the contemporary landscape of video game development. Participating in game jams is not only about creating games but also about acquiring and honing a set of crucial 21st-century skills that are highly valued in today's fast-paced and innovative world. Learning 21<sup>st</sup> century skills through game jam participation is crucial for personal and professional development. These skills not only enhance participants' abilities in game development but also equip them to excel in a wide range of fields and contribute effectively to a rapidly changing world.

## **GAME JAMS IN EDUCATIONAL PROCESS**

In recent years, game jams have emerged as an intriguing departure from conventional educational approaches. Their distinctive and unconventional format has, for the most part, remained relatively unexplored within educational circles, which predominantly adhere to established curricula. Notwithstanding their deviation from traditional methods, game jams represent a valuable opportunity. By convening professionals from diverse disciplines, encompassing



developers, designers, artists, critics, and students, they create a robust and dynamically charged environment.[6]

These game jams compel participants to conceive, design, and produce a game prototype within an exceptionally brief timeframe. This high-velocity approach to game development pushes boundaries, fostering a mindset that encourages innovative thinking and liberation from the constraints often encountered in protracted projects. The inherently collaborative nature of game jams nurtures an interdisciplinary ethos, facilitating the exchange of knowledge and holistic learning.[2]

Game jams, owing to their inherent design characteristics, serve as fertile grounds for the cultivation of creativity and innovation. They act as transformative platforms that transmute theoretical knowledge, often procured within the confines of traditional classrooms, into tangible and practical projects.[9] Beyond the realm of technical competence, these events facilitate the nurturing of vital life skills. Participants invariably refine their communication abilities, gain invaluable insights into the nuances of teamwork, and enhance their prowess in problem-solving—an aptitude that holds undeniable significance in the context of the contemporary world, as underscored by the Council of the European Union.[8]

Furthermore, in the context of an increasingly globalized environment, the cultural exchange and creative expressiveness encouraged by these international initiatives assume an invaluable stature.[7] In harmony with these merits, the overarching vision of this project stands unequivocally clear: to seamlessly integrate the institution of game jams into the very fabric of higher education. This pursuit is neither whimsical nor devoid of empirical foundations but is firmly grounded in rigorous scientific inquiry and practical experiences.[4] Leveraging existing reservoirs of knowledge concerning game jams and melding them with hands-on experiential learning, the project endeavors to engineer a comprehensive educational curriculum. This curriculum, while placing a strong emphasis on the development of soft skills, remains keenly attuned to the significance of hard skills, all the while affording tangible resources to facilitate the learning process.[10]

Game jams, at their essence, transcend mere game creation events; they constitute preparatory grounds for budding aspirants striving to make their mark in the ever-evolving landscape of the gaming industry.[1] These events, rooted in principles of safety and inclusivity, offer participants an expansive panorama of game design, the honing of diverse skill sets, and access to invaluable networking opportunities. Considering the gaming industry's persistent ascent in terms of economic contribution and job generation, initiatives of this nature are assuming an increasingly pivotal role.[11]

## **METHODOLOGY**

In this article, our paramount emphasis centers on the meticulous delineation and precise specification of the game jam event. Within this framework, we adopt a discerning approach in the identification and selection of soft skills that can be effectively cultivated and applied within specific game jam formats. Subsequently, we leverage this descriptive framework to approximate the intricate mechanisms through which knowledge acquisition transpires during these distinctive game jam experiences. Our methodology entails a systematic analysis of the interplay between game jam formats, the acquisition of soft skills, and the concomitant expansion of participants' knowledge repositories, thus contributing to a nuanced understanding of the multifaceted dynamics inherent to game jams as platforms for skill development and knowledge dissemination.

## **SOFT SKILLS THROUGH DIVERSE APPROACHES**

Participating in game jams can help individuals develop a wide range of soft skills that are valuable not only in the context of game development but also in various other aspects of life and work. These skills, also known as interpersonal skills, encompass traits such as communication, adaptability, teamwork, problem-solving, creativity, and emotional intelligence. Participating in game jams imparts a multitude of forementioned skills. Game jam fosters creativity as participants are often tasked with crafting innovative game concepts that conform to predefined themes and constraints and cultivate problem-solving abilities by necessitating creative solutions to technical, design, and gameplay challenges within the constraints of limited time. Adaptability is honed as participants swiftly adjust to unforeseen developments and make on-the-fly decisions. Additionally, game jams provide lessons in time management, teaching participants effective task prioritization and resource allocation to meet demanding deadlines. Effective communication becomes paramount, especially in team-based projects, facilitating coordination, idea-sharing, and conflict resolution. Collaboration skills are further enhanced as participants work alongside individuals possessing diverse backgrounds and skill sets. Lastly, game jams instill the capacity for sound decision-making under pressure, as participants are compelled to make informed choices regarding design, mechanics, and implementation within the challenging time frame.[3]

Due to limitations in scope, this article focuses on identifying the five prevalent global typologies of game jams, accompanied by illustrative instances of soft skills acquisition exhibited by participants throughout these events.

Game jams are approached in a variety of formats, each with its distinctive focus and creative challenges. Firstly, Theme-Based Jams, one of the most common formats, present participants with a specific theme, word, or concept that must be ingeniously woven into their games. This theme serves as both a source

of inspiration and a cohesive element that binds together the diverse array of games created during the jam.

Secondly, Genre-Specific Jams revolve around specific game genres or styles, encompassing platformers, puzzle games, horror experiences, or role-playing adventures. These jams encourage participants to deeply explore the intricacies and defining characteristics of their chosen game genre.

Thirdly, Mechanic-Centric Jams break away from themes or genres, instead focusing on a chosen gameplay mechanic. Whether it involves physics-based puzzles, procedural generation, or time manipulation, participants are challenged to craft games intricately built around the designated mechanic, thus pushing the boundaries of creativity and innovation.

Fourthly, Art or Audio Jams prioritize the realms of visual artistry or audio design as their central focus. Frequently conducted in collaborative teams, these jams provide a platform for participants to showcase their expertise in artistic or musical domains, with gameplay occasionally taking a back seat to emphasize the aesthetic or auditory experience.

Lastly, the Solo vs. Team Jam distinction lies in the collaborative dynamics. Solo Jams task individual developers with harnessing their skills and creativity independently, serving as a platform for personal exploration and innovation. Conversely, Team Jams highlight group efforts and multidisciplinary collaboration, fostering an environment where diverse talents converge to bring game concepts to life.[6]

The selected format of game jams profoundly influences the soft skills that participants can cultivate during these immersive creative endeavors. Each format places distinct emphasis on facets of game development, teamwork, and problem-solving, thus shaping the nature of the acquired soft skills. Theme-based jams, for example, foster creativity by prompting participants to cleverly integrate a specific theme. Genre-specific jams deepen understanding of game genres and mechanics, enhancing design knowledge and teamwork. Mechanic-centric jams stimulate innovative problem-solving as participants grapple with designated gameplay mechanics. Art or audio jams prioritize artistic and collaborative skills, enriching the visual and auditory aspects of game creation. The choice between solo and team participation further molds self-reliance and teamwork, respectively.

In unison, these diverse formats offer participants a multifaceted developmental platform for a wide range of valuable soft skills, establishing game jams as a highly enriching and adaptable experience for personal and professional growth.

## CONCLUSION

In conclusion, this paper has delved into the intricate world of game jams, meticulously dissecting these creative events to understand their underlying dynamics in terms of soft skills cultivation and knowledge acquisition. By selectively scrutinizing various game jam formats, we have identified specific soft skills that find optimal implementation within these unique contexts. Moreover, we have elucidated the multifaceted ways in which participants accumulate knowledge during their immersive game jam experiences.

Our systematic analysis underscores the profound educational value of game jams, demonstrating their capacity not only to foster creativity and problem-solving but also to facilitate teamwork, communication, adaptability, and decision-making. These soft skills, honed within the distinctive parameters of game jam formats, hold immense relevance in the contemporary landscape of education and employment. Our exploration has unveiled the diverse mechanisms through which knowledge is acquired during game jams.

In sum, this inquiry has shed light on the pedagogical potential of game jams, positioning them as dynamic platforms for the cultivation of soft skills and the acquisition of knowledge. As we move forward, recognizing the pivotal role of game jams in modern education and professional development becomes increasingly imperative, offering profound insights into the evolving paradigms of skill acquisition and experiential learning in our digital age.

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# LANGUAGE POLICY IN DUBAI'S SCHOOLS: FROM THEORY INTO PRACTICE

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## ABSTRACT

The qualitative research aims at exploring the language policy in Dubai's schools and highlight the areas that can be improved from theory to practice. There was the use of a Survey, Semi-Structured Interviews, and Secondary Data (Policy Documents). Purposive sampling was used to choose research participants with Survey Participants being taken from education professionals or those who closely work in fields related to education. This was done to ensure the reliability and validity of the data collected. The theoretical framework was based on approaches such as the Language Policy and Planning (LPP), Critical Language Policy (CLP), and Language Management Theory (LMT). These helped the researcher have a firm basis to develop the academic project and understand some of the language policy dynamics currently happening in the UAE. The outcome of the research showed huge potential for language policy research. Some of the issues that were noted to hinder the implementation of effective language policy in the UAE include poor communication of language policy across the school community, staffing issues, the lack of resources, the absence of many different native languages in the mainstream curriculum, and the mismatch between the policy expectations and the actual level of student's aptitude. The solutions highlighted in this study include the setting of clear goals for the language policy that is shared with the policy designers and the policy users, the increased involvement of language teachers with the school leaders in the design and review process of the language policy, continuous professional development of language teachers among others.

**Keywords:** *Policy, Language Policy, Language Planning Policy, Monolingualism, Bilingualism, Multilingualism*

## INTRODUCTION

### Background and context

Language policy is a disputed topic with no universal definition. It is part of traditional language planning. Previous research emphasizes the relevance of language policy in addressing socio-cultural disparities and promoting community inclusivity. Thus, it is a social construct with many characteristics. Language policy can also be textual or cultural, depending on the circumstances.

Language policy in the UAE is also challenged. The UAE has seven Emirates and has seen an incredible economic transition. Its diversified population produces a unique environment. The American Curriculum, British Curriculum, International Baccalaureate, and Ministry of Education (MOE) Curriculum compete due to the UAE's rapid growth and diversity. All these systems follow the MOE's vision and plan for quality and efficiency in education. varied school systems have varied and similar approaches to establishing and executing educational policies. In this context, Findlow (2006) highlights that in Dubai, there exists a significant presence of many cultural backgrounds, leading to a competitive environment among schools to attract multilingual students who want to maintain their original languages. This competition arises against the prevailing backdrop of English serving as the lingua franca in the majority of international schools. However, the UAE prioritizes Arabic as the Emirati people's mother tongue [4].

Since Arabic is the language of Arab heritage, religion, and identity, it is ubiquitous in schools [10]. Unchecked English language growth might be detrimental to learning Arabic and the nation's values, traditions, and identity.

### Problem Statement

As language policy evolves, Goundar (2017) emphasizes the importance of ongoing study. Language policy in the UAE is problematic because many schools only teach Arabic and English, ignoring several native languages. This policy contradicts multilingual society. Language policy implementation in schools is equally problematic for kids, parents, and other stakeholders. This highlights the social justice issue that should underpin language policy [8]. The country's diversity requires schools to manage language teaching and learning by establishing and implementing effective language policies that support school systems and meet context-specific objectives. Prinsloo (2011) then emphasizes the importance of basing language policy on usage rather than politicians' assumptions. Language policy design must examine numerous elements relevant to its immediate environment [8]. Global and national circumstances, the school's audience, and local socio-cultural norms are considerations. The MOE and KHDA oversee all Dubai schools. They set school rules, including language policies and teaching and learning standards [3]. Thus, schools must create language policies that meet KHDA and MOE regulations and community demands. Middle and senior school leaders help create and administer a language policy. However, the obligation to teach Arabic as a first and additional language in all UAE schools and the rapid popularity and growth of English, which is being conscripted in schools nationwide, often make implementation difficult. These problems may cause a gap between theory and practice since the language policy document may not be adopted.

## Research Goal

The study examines Dubai schools' language policy and suggests ways to enhance it.

## Research Questions

Three questions will guide the research:

1. Which gaps exist between the language policy paper and implementation?
2. What hinders language policy implementation in Dubai international schools?
3. Can school leaders overcome language policy implementation challenges?

## Study Importance

This study is important since it will inform educational stakeholders on UAE school language policy implementation. The diverse local context has caused many ambiguities and inefficient language policy measures. This research attempts to highlight these issues and provide ways to improve language learning practices. In particular, the research will help international schools in Dubai understand the language policy formulation, implementation, and review process, as well as the key issues school leaders confront, and possible solutions based on the data.

## Literature Review:

This section will examine language policy and related research using a comprehensive literature review. Baumeister & Leary (1997) define systematic literature review as identifying issues and critically assessing a study's findings. A Literature Review broadens study questions and replies with practical applications. Siddaway (2019) lists seven steps in a systematic literature review: scoping, planning, identification, screening, eligibility, and data collecting strategy. This study report studied and discussed several earlier studies, however they all focused on language policy formulation and the design and review process. No study has examined the obstacles of implementing language policy in foreign schools and possible remedies, leaving a void in theory.

This work is valuable since it considers language policy theory and practice generally. It offers proposals for future school language policy makers.



## Policy Success Elements

Schools must consider various factors while creating language rules. These include policy background, instructors as policy subjects, actors, text, and conduct, standards, and learning policies. This research work focuses on translating policy texts into actions and ideas into contextualized practices. A successful educational policy recognizes multiple cultures, including communities, traditions, and histories, which coexist in schools. Educational policy planners neglected teacher preparation and training, role changes, and important professional expertise.

This shows that the materialistic environment of the policy process is prioritized over resources, teachers, and students [2].

In contrast, (McConnell 2010) believes that successful policy preserves government policy aims, legitimizes it, builds a durable coalition, and symbolizes innovation and influence. The implementation success of these aspects can be assessed. These success criteria assess the policy's resilience, conflict, precarity, or failure based on the following elements. Policy success or failure meets Harman's description of policy as a product.

Risager (2007) agrees with Braun (2006) that culture and teachers are important factors in language policy, focusing on the language teacher, language choice and attitudes toward different languages, target language country awareness, and language ecological awareness. Due to the interaction needed between individuals, language policy can be micro-level rather than macro-level, as teachers play an important role in implementing the target language in the learning environment, choosing the language, and attitudes toward languages and dialects.

The language policy consists of primary components: practices, beliefs, and management. linguistic policy is shaped by linguistic ideology. This shows how each nation has a preferable language and how one language is more important for national unity than another, such as how English language education is now essential for the country's economy. The UAE prioritizes language policy initiatives that position Arabic as the essential language for identity and culture and English as the important language for business. Language practice, the second component of language policy, underpins societal language use independent of legislation. Third, language management involves managing and influencing language practices. Also, the language policy should analyze official policy documents since real language practices indicate authentic language policy.

Kaplan and Baldauf (1997) postulated that The Language Planning Policy is the first one and is the classical approach, the second one is the language management approach, the third one is the domain approach and the fourth one is

the critical approach. The classical approach continues in the tradition of language planning [7].

The language policy assumptions are criticized by many researchers like Kwon (2020) who claims that over-attributes language loss to native speakers' failure to realize that their language survives any linguistic onslaught from dominant languages. Social, neocolonial, economic, political, and technological elements that cause language loss are neglected. This weakens Spolsky's arguments for a more holistic approach to language policy dynamics.

Shohamy (2006) suggests a more complex debate that lowers the gap between beliefs and practices to develop Spolsky's paradigm. This led to the concept of "de facto language policies" that link ideology and practices through standardized language test mechanisms. With Arabic as a mandated subject and schools' dedication, the UAE illustrates this process. However, most foreign schools teach English and require it for university and career applications. Shohamy (2006) highlights the link between language tests and language management forms that may not be in language policy but are powerful in language practices.

One issue with Shohamy (2006)'s "de facto language policies" is that private schools have their own language policy norms. Kim (2015) claims that private educational institutions have an overbearing impact and promote English, which can replace "de facto language policies" with Private Education as De Facto Policy.

### Do All International Schools Have Language Policies?

The United Arab Emirates (UAE) has boosted language policy and planning measures in recent years because it is intent on investing in English language education at all levels (public and private). Even if Emiratis make up 20–25% of the population, the country is explicitly striving to maintain Arabic language, especially for Emirati students.

The International Baccalaureate (IB) education program standards and practices document states that all IB schools must have a meaningful language policy that enhances international-mindedness and intercultural understanding by developing students' ability to interact in many ways using more than one language. This emphasizes bilingualism and multilingualism, and the IB school must establish, execute, share, and review the language policy.

The language policy of an IB school must describe how all school members participate in its execution. All IB institutions worldwide must follow these rules. In contrast, British and American schools have no guidelines for language policy formulation and execution, which can lead to confusion and personalisation.

Some schools don't even have a language policy. The technique and data gathering sections will elaborate on this topic.

According to Corsan (1999), some high school departments cannot address all language concerns, thus they should have two language policies: one for each department and one for the school. The departmental policy emphasizes instruction and evaluation, while the whole school policy addresses critical social and cultural diversity issues. This may delay the language policy's implementation, which will focus on answering the second research question. It is also important since policy execution depends on how well it is conveyed to the school community, especially instructors who must construct the best curriculum according to the policy.

This research will highlight the importance of language policy at international schools and examine the viability of a single policy for each school system by interviewing participants.

### Language Policy Issues in the UAE

Languages and heritage are linked because people use them to reflect their traditions and heritage. This makes mother tongue study and devotion critical in schools, especially multinational ones. The UAE is multilingual, yet the language policy paper only uses Arabic and English. Arab students must learn Arabic first and all other languages are optional. However, many multilingual Arab students in the UAE, especially in Dubai, learned another language in addition to Arabic, and English is the most prevalent second language.

National Ministry of Education standards require teaching languages in Dubai. It emphasizes Arabic and English, the UAE's main languages and topics. All Dubai schools must know, follow, and use this framework. Setting this framework regulates language instruction. However, educational officials may be confused about other languages taught in schools but not in the language policy. The unregulated languages are Spanish, French, and German. These languages get less emphasis than English and Arabic locally, but they're crucial at foreign schools. [2] claims that external pressure on schools to satisfy standards and frameworks overrides their unique learning goals.

Non-Arabs must also learn Arabic under a framework. This prioritizes Arabic and makes executing the language policy harder because teaching Arabic to non-Arabs is difficult. Non-native Arabic students may have an uncertain attitude toward Arabic because they will be enrolled in the subject as an additional language, which may affect their learning attitude [5].

Vision 2021 seeks to improve Arabic language learning in all UAE schools. Arabic is predicted to grow and be spoken and written everywhere throughout the country. The UAE wants to expand the Arabic language since it is the language

of communication and culture and has the potential to become the language of science and technology.

Expatriate parents may be frustrated when their children don't speak or learn their mother tongue at school. Expatriate parents may not understand that they occasionally accidentally use new language vocabulary instead of heritage language words. Multilingual society makes language policy in schools the most complicated locally and internationally. The school domain includes policy participants like teachers and pupils. This varied by ability, age, gender, level, and language competency. The British Council found that language policy implementation challenges include understanding the complexity of the policy, policy development, and management, highlighting the local context, promoting locally assessed languages, and critically evaluating the policy [6].

[11] claims that all UAE residents contribute to language conflicts, diversity, and policy. Policymakers in the UAE must evaluate the national and international settings when designing language policies, work responsibly, and respect the requirements of a varied community. They must better comprehend expatriate language policy experiences, including learning. This study will identify, study, and propose these genuine difficulties, which are prevalent at most foreign schools. Language policy gaps and issues extend beyond the English-Arabic dichotomy and Emirati pupils' multilingualism to expatriate language demands.

This paper is expected to illuminate and propose solutions to help school leaders design and implement practical language policy documents.

## **METHODOLOGY**

### **Methodology and research paradigm**

The Chapter describes this study's methodology. A qualitative method allows the researcher to collect extensive data from individuals. The study aims to illuminate the theoretical and practical gaps in language policy and the issues teachers, middle, and senior executives have when implemented it in Dubai's international schools. It explores ways to lessen teaching and learning obstacles.

### **Setting, Participants**

Participants at five Dubai IB and British international schools were surveyed. Participants included senior executives, middle leaders, language heads, and teachers. Most of the forty survey participants were language teachers. About 17.5% of participants were senior leaders from schools, 15% were middle leaders, and 12.5% were language department heads. The participants came from various countries, with 50% Arab. This survey was conducted and shared using Google forms, and schools and participants received a link to participate.

Two language department heads and two senior leaders participated in semi-structured interviews. Interviews were conducted in person and by Zoom video call. To get the most information from interviewees, the researcher conducted one-on-one interviews online and offline. Participants must have led the languages department at the selected schools for five or more years or been in a senior leadership post for three years. For confidentiality and anonymity, the researcher will refer to the research participants as (X, Y, Z, and A). Participant (X) is a senior leader (Head of Secondary) at an International Baccalaureate School, participant (Y) is a senior leader (Deputy's head), participant (Z) is a Head of Languages at a British school, and participant (A) is a head of languages at an International B. The lack of a language policy in other school systems led to more IB students.

### Instrumentation

It can be emphasized that instrumentation—the equipment or means by which researchers quantify variables during data collection—is essential for scientific studies. Instrumentation involves instrument design, selection, building, and evaluation, as well as how a researcher ensures trustworthy and valid results.

Audios from the semi-structured interview were retained and transcribed. All questions were categorized as comparable or different, and data from IB and British Curriculum schools were compared. This attempted to determine whether the educational system implemented the language policy better. Data analysis was interpretive. It'll happen in the next chapter.

### *Survey: Instrument One*

Nine English and Arabic questions included in the poll. The questions asked about foreign school language policy implementation issues and why they exist. The questionnaire sought solutions to these issues. The survey has five open-ended and four multiple-choice items. Three research topics addressed language policy implementation issues and solutions, which guided all questions. Participants shared their thoughts, experiences, and opinions using open-ended questions. Some questions sought replies that illuminated other topics that could be included in this study's recommendations. Appendix A contains survey questions.

These qualitative tools collect descriptive, non-numerical, holistic, and rich data. All participant replies to all questions were highlighted and analyzed to generate survey data.

*Instrument 2: Semi-structured interviews*

The semi-structured interview illuminated the issues. The semi-structured interviews allowed the researcher to ask more questions based on participant responses. See appendix (B) for interview questions.

*Instrument 3: Policy Documents.*

It was impressive that the researcher obtained language policy documents from International Baccalaureate schools. Many British and American schools have never heard of language policy. All IB schools must have a language policy that aligns with the vision, mission, and philosophy. This level meets the organization's international teaching and learning standards. IB schools must have a written language policy that fits students' needs and reflects the IB's vision and mission.

*Data analysis*

Any research project needs data analysis. It aids data summarization. Researchers use analytical and logical thinking to analyze data to find patterns, correlations, and trends.

*Data analysis*

As known, qualitative researchers often have large data sets for quantitative research. A rather large data collection was organized by subject, theme, question response type, and other factors in this study. A table was built to organize data into themes and diagrams like pie charts and tables for data presentation and analysis. Diagrams and percentages were used to analyze survey data, while in-depth interview data was thematically analyzed.

*Survey: Description*

The researcher calculated percentages per response using descriptive statistics on survey data. Descriptive statistics help researchers justify quantification. However, descriptive statistics was mostly employed to analyze data, while qualitative qualities were utilized to convey it, replacing percentages with phrases like “most, an equal number of, less than, fewer.”

*Interview: Theme analysis*

Thematic analysis was important to this study's data analysis. [2] contend that many qualitative researchers underestimate thematic analysis. There is minimal literature on how to conduct a thorough thematic analysis in academia due to its peripheral approach compared to other major data analysis methodologies. Researchers used topic analysis on interview transcripts. The method enables the

researcher to thoroughly evaluate interview data to uncover similar themes—recurring concepts, topics, patterns of meaning, and ideas.

### *Policy documents: Discourse analysis*

Discourse Analysis is defined as the study of natural language in any social situation. Qualitative discourse analysis helps us understand human experience noting its meaninglessness in its own language. It only has meaning when humans assign shared uses. The researcher interpreted policy papers using discourse analysis. Policy documents have no validity unless educational stakeholders give them a common use meaning.

### **Ethics in Research**

Before being considered by the researcher, all subjects had to give informed consent and volunteer. Participants knew the study's purpose before taking the survey. Research participants were kept anonymous and confidential per University Research Ethics rules. Participants were informed of the survey's goal in the description.

The interviews had 10 predetermined questions that needed detailed responses and allowed the researcher to ask follow-up questions. All in-depth interviews were conducted in a relaxed setting. In-depth interviews went well, and the researcher clarified any difficult questions. This study did not name respondents to maintain anonymity, and all recorded material will be safely maintained before being deleted once the University acknowledges that the researcher has completed studies (See appendix C).

The two schools gave the researcher permission to utilize their policy documents in this study, and one of their top officials informed them that their policy documents would be analyzed and criticized.

## **RESULTS AND DISCUSSION**

### **Stats from the survey**

The poll focuses on the first two research questions. Each of the nine questions received 40 responses from senior executives, middle leaders, head of languages, and language teachers. The researcher will present and analyze the findings using other scholars' arguments.

Language teachers were the most participants, followed by senior leaders, middle leaders, and language heads. This diverse group of language leaders, teachers, and learners ensured data reliability and validity. The second question showed that most participants work at schools with an active language policy, which represents most of the overall responses. This is a positive sign that many

international schools in Dubai pay attention to language policy. Few individuals said their school's language policy is being designed, and fewer said it doesn't exist. The chart follows:

Page 36 shows that international schools need a language policy to govern language teaching and learning, with a focus on bilingualism and multilingualism.

When answering the third question, "Do schools need a language policy?" Most responders stressed school language policies. This question sought participants' opinions on language policy's importance. Like the second question, most participants indicated a language policy is extremely important, while a minority said it is somewhat essential, but no one answered it is not important. This shows that you understand how the language policy guides and manages language teaching and learning at UAE international schools.

Answer Question 4: Who designs language policy at your school? There was mixed feedback from questionnaire respondents. This was important because it showed the school language policies' authenticity and efficiency.

A higher number of participants stating that senior leaders (SLT), curriculum designers, and teachers design language policies at international schools shows a lack of knowledge about the process. Another few answered it's the SLT and department head's role, while another few said it's the head of languages' role. However, a few respondents referred to this position in the job description of SLT members, while some said they didn't know about this procedure or who should be involved. These conflicting responses reveal a lack of communication about policy design and language policy design at international schools. It highlights the disparity between the language policy statement and actual practices and the dysfunctional communication between school officials and language teachers, which must be addressed.

The language policy's implementers are as important as its designers. From start to finish, everyone must know the process. Thus, school administrators and teachers should create the language policy. The ideal team should include some SLT members, the head of languages, curriculum coordinators (if relevant), and language teachers to draft and construct the language policy. Language instructors must be involved because they will apply the policy with students, they know better than any school leader. Based on their practical experience and students' needs analysis, teachers can provide the best language policy input.

Fifth question: How is language policy conveyed across the school? The table shows that schools distribute language policy documents in various ways. Regular department meetings are the most popular means of explaining language policy, according to staff responses. Since this figure does not have a majority, most teachers are not attending meetings while regular department meetings strengthen



schools, teaching, and collaboration. The position of disseminating the language policy through department meetings has no majority, thus most instructors do not hear it discussed in their meetings. Additionally, department meetings, shared drives, and emails only reach school employees, cutting students and parents out of language policy communication.

School language policy is also communicated through professional development and training. A small sample of instructors who judge this technique effective will get to discuss the policy paper, raise issues, and gain clarification. This strategy is less effective than department meetings because it may only happen once or twice a year, thus workers are not reminded of the policy and implementation procedure. Like the orientation or induction week at the start of the school year.

Some schools post their policies on their website, which is beneficial. Since many people don't visit the school website, this strategy is useless for communicating language policy to the community. Due to unfamiliarity, some stakeholders may not find the policy paper on a school's website or think it's important. A crucial document must be presented and discussed to the school community, including instructors, students, and parents. The school community includes kids who will be affected by the policy [2].

However, few individuals reported that their schools do not convey their language policy, which is alarming. Consideration of language policy as a product rather than a process is problematic. Designing policies without communicating them to the school community is pointless. The language policy's principal purpose is to guide school language teaching and learning. Refusing to share the policy with the school community shows that schools are not interested in implementing it and cannot evaluate their success without actual language practices.

Staff and parents should be informed of language policy through department meetings, professional development, emails, shared drives, and information sessions. Communication with language teachers must be regular and consistent to maximize policy implementation.

It may be communicated with parents once or twice a year during school information meetings utilizing more than emails, shared drives, and the school website. For more people to grasp the language policy's aims and work toward them through a clear and simple implementation procedure, it must be adequately stated. Effective policy communication will bridge the gap between policy documents and practice. It will inform school stakeholders of language expectations and boost language policy success.

Answering the sixth question: "Do you think the language policy is followed?" "A big proportion of participants claimed language policy is taught and applied in

language classes. A large percentage indicated what is taught and applied is partially related to the language policy, while a smaller number claimed the policy is not liked with the practices. These comments reflect the varying levels of language policy implementation at international schools and suggest that school administrators are paying more attention to it.

However, there should be reasons for not applying the policy and only selling it. Poor policy communication across the school and misunderstanding of policy aims and expectations may be one explanation. The answers to the next question illuminated the primary reasons Dubai international schools fail to apply the language policy.

Language policies are appropriate and transparent if they have a clear objective and vision. Otherwise, they are just documents with no impact. The leadership team clarifies the aim and policy applicability. Leaders must involve language teachers, department heads, and other stakeholders in design. Education practitioners need regular CPD and departmental meetings to communicate language policy updates and opinions. Professional development may occur in the school community as people learn from each other. As learners work toward a common goal, the teaching staff and leadership team form a professional learning community.

Because it's cheap and effective, this professional development is preferred by schools and happens routinely. This reflective practice promotes a positive change in the school environment and culture, where everyone is involved and responsible for achieving the school's goals and implementing its policies. Hosting external professional development sessions that can gather language teachers from different Dubai schools and train them on the language policy's use and implementation is also effective.

Regular policy review is a reflective technique for improvement. After receiving feedback from practitioners, monitoring the policy's implementation across the school, and analyzing the data, policymakers must make the necessary changes to make the policy more applicable and meaningful.

#### Interview data

Four participants controlled this topic and shared that language policy at foreign schools must be illuminated as a significant subject and essential aspect for the appropriate, coordinated, and managed teaching and learning of languages. Only one participant (Z) has not participated in the language policy formulation process with the language teachers. The language team at participant (Z)'s school was less active in design. In the other three schools, top executives, the head of languages, and all language teachers design policies, which is good. This suggests that engaging the head of languages and language teachers in the planning process is still important. Sharing the policy with teachers begins with their participation

in the planning process. Participant (X) underlined the necessity of discussing the language policy with parents, adding that new parents who wish to join the school should know it, especially in this global world and technology that allows individuals to travel at any time. She suggested including one teacher from all subjects in designing the language policy because she believes that “every teacher is a language teacher” and that the IB philosophy states that “Culture 4: The school implements, communicates, and regularly reviews a language policy that helps to foster intercultural understanding through communication.”

Participants (X) and (Z) explained that the successful language strategy has two parts: one for native speakers and one for non-native speakers. Participant (Y) described the concept of teaching and studying languages, the school's support for native language speakers, and the high school's language course rules. Participant (A) said the national context, language behaviours, and language support are the most important parts of the language policy. Although three of the four participants follow the same system and curriculum, these responses show how far and how different they were in recognizing the policy's essential aspects. This shows that the policies were not designed to clear standards, so we asked about a unified language policy across Dubai's international schools, which all the participants declined due to implementation challenges.

However, participant (X) suggested creating a single language policy for international schools that follow Dubai's system, such as British and IB schools. This can be difficult because every school has a different setting and needs a unique policy to meet their needs. Schools can share subheadings and sections (the key elements) for tailored content. Participant X added that schools may create a fully unified Arabic language policy as mandated and aligned by the MOE framework and expectations not only in Dubai but across the UAE, and another policy for schools that follow the same curriculum that can be tweaked as needed. This inventive and novel solution may improve Dubai's international schools' language policy design and implementation.

The first gap between the policy document and actual practices was teachers' lack of time to always refer to the policy document and make sure their practices are aligned with the statements in the document, as some classroom practices are not mentioned in the policy for many reasons. Most schools prefer the easier approach that teachers have been familiar with for years, so they don't check and follow the policy. Another reason is the rapid development and updates that occur throughout the year and need to be addressed in the classrooms even if not in the policy.

The policy must be flexible and modifiable to accommodate recent events like the COVID-19 outbreak, which drove educational institutions to find alternate solutions. The review process must occur often throughout the year.

When parents, especially in middle and high schools, take responsibility for their children's language choice more than their teachers, they don't always follow their advice. Participant (Y) noted that parents can be difficult when they receive the language policy and verify what the school should give for language learning. They may grow more dependent on teachers and not take responsibility for their children's education.

Participant (Y) proposed hiring learning assistants to help Arabic teaching and learning and providing tailored programs for students who require extra support to close the theory-practice gap. These learning aids also help teach other languages. This method is offered because learning assistants cost less than full-time teachers and can help teachers and middle leaders fill learning gaps. Participant (X) recommended offering mother languages as Extra-Curricular Activities (ECA) after school to help kids who cannot study them during the school day practice them. Schools can also provide mother language courses from authorized institutions associated with the school and followed up by staff.

Participant (X) underlined the need of consistently evaluating the language policy to remedy gaps and get teachers on board. She advised including parents and students in the review. This inclusive procedure will include parents' and students' perspectives in the policy, making institutional stakeholders more accountable and responsible school members.

#### Data from policy documents

As the policy documents used in this study are from two separate schools that are not international schools in Dubai, the researcher will refer to the older school, which has been open for over 10 years, as school. The newer school (P) operates for four years and follows the IB system. The numerous policy document divisions reflect the confusion and ambiguity we saw in the interview responses. The eleven-page school policy (J) is more comprehensive. The first page featured the school's vision, mission, and basic principles, followed by the policy. However, school (P) summarized a four-page policy without an introduction, vision, mission, or goals. A concise policy statement replaces all of these. School (J) supplied thorough information about the school context and the policy document's purpose following IB program standards and practices for language policy design and implementation. School (P) provided quick clarifications about its vision and mission.

School J's policy states that the school community is a resource for language acquisition and that pupils must learn at least one language other than their home tongue. The school develops three languages—Arabic, English, and French—despite having pupils from several countries. Some students' native languages aren't listed. This explains why some survey respondents said the policy document 'slack of transparency and inapplicable statements cause the gap between it and practices. The school policy (P) only describes the divisions of Arabic and English

across the school and does not mention any other languages students can learn at this school, which is a poor practice that shows a lack of experience in language policy design. In addition, school (P)'s policy document states that it offers English language acquisition courses for non-native English speakers in the primary and middle stages, but all students study English as a first language, which creates challenges for teachers and students and increases language barriers.

The school's language policy (J) details language practices and support expectations. It specifies the tasks of language teachers, department heads, and school leaders.

EAL, Arabic, and mother language maintenance are part of language support, as are language classroom methods. Teachers benefit from this policy information and can better perform their duties.

Middle school (G6-G9) pupils must study Arabic, English, and French, with only EAL students free from French. This makes the approach appear coercive, limits learners' options, and discourages language learner preference.

School (J) includes entrance requirements, such as an English proficiency test but not Arabic or French. This reveals that English is more important to school leaders and the language policy than Arabic and other languages, even though Arabic is required in all Dubai schools. The policy mentions Arabic support, but it does not require an admission assessment for Arabic proficiency level, which creates gaps between policy documents and actual practices and challenges Arabic language teachers when they receive students without prior knowledge of their levels. School (J) lacks policy review information, despite school (P) highlighting it in their policy. The role is narrowed to IB coordinators and pedagogical leadership team, with no mention of language teachers' role in policy design or review, or frequency of review. This is despite clear guidelines in the IB education publication "reviewing a language policy."

## Discussion

The research found that language teachers made up most participants, followed by senior leaders, middle leaders, and language heads. Despite language instructors' prominence, school officials make language policy choices, leaving out critical stakeholders. This makes the language policymaking elitist. This contradicts the linguistic Management Theory, which emphasizes sustainable linguistic problem-solving. Centralizing language policymaking to educational officials without language teachers generates a broken system. With the start of the 21st century, [10] states that "language planning" has given way to "language management". Language management theory (LMT) has been broadly defined as language activities and communication or "behavior towards language." Institutions or education directors like the Ministry of Education, which makes

language teaching and learning decisions in a country, are responsible for these activities. Language management cannot be effective without proactive stakeholder involvement, especially language teachers.

When answering the third question, "Do schools need a language policy?" "Most responders stressed school language policies. This question sought participants' opinions on language policy's importance. It was stated that an effective language strategy in schools requires skill, cooperation from stakeholders like parents, and other considerations. [2] suggest that schools must consider numerous factors while creating educational policies like language rules. These include policy background, instructors as policy subjects, actors, text, and conduct, standards, and learning policies. Interviewees all stressed the importance of language policy, and educational institutions have policy documents to prove it. This emphasizes that language policy should be inclusive and that authorities should better comprehend expatriate language policy experiences.

Only a fifth of respondents believe senior leaders (SLT), curriculum designers, and instructors design language policy at foreign schools. The education ministry and other stakeholders are involved in language policy drafting at foreign schools; therefore, this shows a lack of awareness. This can be argued as a good policy preserves government policy aims, legitimizes it, builds a durable coalition, and symbolizes innovation and influence. These elements can be measured by their implementation success and go against what a fifth of respondents called language policy's source. This shows the gaps between the policy text and real practices, including stakeholders' lack of information about who designs language policy documents. This contradicts several interviewees' claims that language policy belongs to all educational stakeholders, who should provide input on the policy text to make it viable.

The policy paper and actual behaviours differed, according to interview data. The first gap was instructors' lack of time to always go to the policy document and make sure their activities match its words, as some classroom practices are not specified in the policy for several reasons. Language policy is also not implemented effectively in schools due to the lack of a uniform document for multiple curriculums, language prejudice, and language teachers' propensity to teach topics they know.

This generates a dysfunctional language learning environment because merging language practice and policy to succeed and achieve optimal language policy outcomes.

Dubai language policy issues are addressed. Participant (Y) advised that schools hire learning assistants to help Arabic teaching and learning and create tailored programs for kids who require more support. These learning aids also help teach other languages. This option was offered because learning assistants cost less than full-time teachers and can help teachers and middle leaders cover

learning gaps. LAs will be key stakeholders in the language policy's implementation since many education-related stakeholders are involved. Also, it can depend on how people interpret the regulation offers for flexibility and chances to implement multilingual education. In an interview, participant (X) suggested offering mother languages as Extra-Curricular Activities (ECA) after school to help children who cannot study them at school practice them. Using mother languages as ECAs for translanguaging has obvious drawbacks. Examples include the resources needed and pupils' lack of willingness to utilize languages they may not use in social situations.

Schools have various views on policy documents when analysing them. Institutional language policy documents show how the school community is a resource to improve language learning and how students must learn at least one language other than their mother tongue, but language choice is difficult. Despite Dubai's multilingualism, schools prioritize Arabic, French, and English. This linguistic contradiction must be resolved for Dubai schools to effectively execute the language policy [1]. Without that adjustment, [9] predicts linguistic paradoxes and conflicts.

## CONCLUSION

Due to the country's variety and wide range of nationalities and linguistic interests, UAE international schools (particularly Dubai) have paid more attention to language policy. Monolingualism, bilingualism, and multilingualism are important in language policy, teaching, and learning at foreign schools. Continuous efforts are made to address them in language policy and practice. Many theories and research have identified language policy planning, management, and design. Critical Language Policy and Language Management Theory strive to value and illuminate language policy.

According to the report, not all foreign schools in Dubai have a language strategy, and those that do are not implementing it successfully for various reasons. The UAE's multilingual, multi-curricula, multi-cultural, multi-national nature, and the ministry of education and KHDA's language teaching rules, notably for Arabic and English, make implementation difficult. The dominance of English over all other languages in Dubai, the poor communication of language policy across the school community, staffing issues, the lack of resources, the absence of many native languages in the mainstream curriculum, and the mismatch between policy expectations and student level have added to the challenges of implementing the language policy.

This study suggests creating clear language policy goals and sharing them with policy creators and users. This should involve language instructors and school leaders in language policy design and review. Schools should promote language teacher professional development, language symposiums, and meaningful departmental gatherings to share ideas, concerns, and language best

practices. To ensure all stakeholders obey the language policy, regular monitoring and assessment should be done. Teams in Dubai schools that follow the same system should collaborate to create the best language policy document for Arabic and all other languages so that clusters of schools can implement the common language strategy more consistently.

Finally, schools must develop policies for numerous reasons, but the most important is knowing why and what results they want. After defining key performance metrics, schools should treat language policy as an integral aspect of educational standards rather than a regular product. It will make language policy a consistent, continuous, and meaningful process for educational stakeholders.

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# MULTIVARIANCE OF LEARNING STYLES AND EDUCATIONAL METHODS APPLIED IN FORMAL UNIVERSITY EDUCATION

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## ABSTRACT

The aim of the research paper is to identify types of learners based on the Fleming VARK learning styles and selected learning models applicable in formal university education. The focus is on two higher education fields of study, namely Social, economic and law sciences (6213 – Economics and Management) and Education (7605 – Teacher Training and Educational Sciences). The introduction contains the explanation of basic concepts of learning styles and selected learning models. The results of questionnaire research distributed online in the period from February to April 2023 are presented in a separate part of the paper. Replies of 194 respondents from three countries (the Slovak Republic, the Czech Republic and the Hellenic Republic) were prevalingly processed by means of statistical methods and then verbally interpreted. Jamovi, Version 4.1 statistical software and MS Excel were used for data processing. To analyse data, we used contingency tables and descriptive statistics. Results of analysis show that most students belong to visual and kinesthetic types. Respondents' replies indicate the learning style models are mainly applied in the field of study Teacher Training and Educational Sciences. The research paper is written in accordance with the aims of the primary research project VEGA No. 1/0328/21 "Post-pandemic business management: identifying temporary and sustainable changes in sequential and parallel management functions in the context of the COVID-19 pandemic."

**Keywords:** *learning style (LS), educational method, models of learning style, formal university education*

## INTRODUCTION

The aim of the research paper is to identify student types based on Fleming's VARK learning style model and to explore the applicability of learning style models in formal university education [1]. Learning style /LS) is the manner in which each learners starts to concentrate on new and complex information, processes them, absorbs and retains them (stores them in memory) [2,3]. The interaction of these elements varies with each learner; therefore, it is necessary to determine what it is that with the highest possible probability triggers the concentration of each student, how to maintain it and how to respond to the

learner's natural style of processing information, in order to store the information in long-term memory and retain the content. There are several student types specified on the basis of learning style (VAK, VARK models and others). The starting point of our analyses was Fleming's VARK model (visual, auditory, reading/writing, kinesthetic learning styles). We were interested if and to what extent the models of learning described in theory were applied in university formal education. [1], [2], [4]. The applicability of learning models was analysed in terms of fields of study.

Aims of the research paper are formulated in accordance with the objectives of the primary research project VEGA No. 1/0328/21 "Post-pandemic business management: identifying temporary and sustainable changes in sequential and parallel management functions in the context of the COVID-19 pandemic."

## **DESCRIPTION OF LEARNER TYPES AND LEARNING MODELS**

For the needs of empirical analyses, we apply the classification of learners according to sensory preferences, developed by Fleming, and marked by the abbreviation VARK [1], which represents the first letters of four English words: Visual, Aural, Read/Write (verbal), Kinesthetic (movement). Subcategories of this classification include: visual-nonverbal (visual-image) learning style, visual-verbal (visual-verbal) learning style, auditory (aural) learning style, and kinesthetic learning style.

Learners with the visual-nonverbal learning style prefer sight when learning. Their preferred learning aids are usually pictures, diagrams, graphs, maps, photographs, films, or various symbols. In the text, important parts are distinguished in colour and graphics (arrows, blocks, or circles). These learners like richly illustrated and structured texts and even create diagrams and concept maps themselves and use them to explain concepts or ideas.

Visual-verbal learning style students prefer working with written text when learning. What they read, they can verbatim store in their memory and then precisely present the content. They record in writing what they have heard and then can work independently. Their abstract thinking is well-developed. The teacher can support these learners with worksheets and various sources of supplementary study materials [5].

Auditory learning style is preferred by students who learn best by listening and verbal communication and in discussions; therefore group forms of work are suitable for them. Auditory learners remember what they heard and repeat the material aloud while learning. Such individuals have a musical ear as well as the talent and prerequisites to successfully learn foreign languages. While learning, they are not distracted by background sounds, on the contrary, music supports their learning processes.

Kinesthetic learning style is preferred by students with a need for physical activity. When learning, these students enjoy moving around, cannot sit still for a long time, they like to learn while walking, and often need a break for a short movement rhythmic exercise, and only then can they continue learning. They enjoy learning by doing and like laboratory work, practical exercises, field trips, role play, or project learning. When working with this type of students, lecturers should consistently apply the didactic principle of connecting theory and practice. [1], [2], [3]

The issue of learning styles has been addressed by numerous authors who present their opinions and research results in comprehensive theories (models). To reveal these natural learners' preferences and learning styles, it is important to use a comprehensive learning style model that identifies each individual's strengths and preferences across the spectrum of physiological, sociological, psychological, emotional, and environmental elements. In the research, we implemented the selected learning styles in the following structure:

- Curry Onion Model containing four layers: instruction preference, social interaction, information processing, and cognitive personality style;
- Riding's and Cheema's LS taxonomy, based on two dimensions: 1) processing of information: wholist analytic dimension and 2) presentation of information: verbalizer – imager dimension (with focus on verbal expression, speaking versus representation by means of pictures, graphs or diagrams);
- Rayner and Riding's typology (focused on learning, personality and cognition);
- The Myers and Briggs model is focused on the influence of personality types on learning styles. Their approach consists of processes (perception and processing of information); preferences (situations in which learning takes place, e.g., lightening, temperature, social interaction); and cognitive skills (application of cognition models to learning environment).
- The Kolb Experiential Learning Model contains four cycles: concrete experience, reflective observation, abstract conceptualisation, and active experimenting) [6, 7]

Thus, educational psychology students and teacher trainees learn that students have specific learning styles, and believe these styles should be in harmony with methods of instruction [8]. Some of the most popular learning styles schemas include Dunn and Dunn's Learning Styles Model [3], Kolb's (1984) Learning Styles Inventory [9], [10]. Kolb's (1984) learning styles inventory is popular especially in the USA. Its author claims that the learning processes of individuals differ in two dimensions, namely in the preferred ways of perception (concrete to abstract) and in information processing (active experimentation vs reflective observation). In his LS inventory, Kolb classifies individuals into four

types: divergers (concrete, reflective), assimilators (abstract, reflective), convergers (abstract, active), and accommodators (concrete, active) [10].

Learning style theories are applied in LS inventories, and these can be used in the world of commerce. For example, Hay Group distributed teaching materials based on LS theory as well as an information brochure (2008), the title of which says that people learn in various ways, thus a single learning style cannot be suitable for all learners. According to the brochure, practical advantages of learning style classification include their application in learning and in working contexts, as well as harmonizing the learning style and one's learning experience [11].

Most LS taxonomies are "type" theories, classifying people into different groups according to their approach to learning. The origin of these theories may be traced to the ideas of C.G. Jung (1964) in the area of personality types. Jung's ideas [12] were included in psychology test developed in the United States, namely Mayers-Briggs Type Indicator test popular in the 1920-ies. A successful application of this test contributed to the development of learning style taxonomies. Based on Myers-Briggs test, people can be categorised into several groups; this test provides useful information in decision making on one's employment [7].

## **METHODS OF EMPIRICAL RESEARCH**

In empirical research, we focused on issues related to learning styles and application of LS models in education. During the preliminary research stage carried out using the interview method, we found out that several learning models are used in the practice of education, and based on empirical research, these learning models were included in our questionnaire. The interview conducted during the pre-research stage on a sample of 32 respondents became the basis for designing the questionnaire empirical research. The aim of the empirical research was to identify the opinions and attitudes of teachers in formal higher education regarding the assessment of types of students, and the level of applying learning and education models that are based on sound theoretical background.

The research was conducted using the questionnaire method. Questionnaires were distributed in person and electronically. Empirical research is applicable in all the fields of study listed by the Ministry of Education, Science, Research and Sport of the Slovak Republic [13]. We used the above classification not only for the Slovak Republic but for other countries. Due to the extensive scope of the issue, for the needs of the present research paper, we selected the following groups of study fields: Social, economic and legal sciences (6213 –Economics and Management) and Education (7605 – Teacher Training and Education Sciences).

The research sample of respondents was created by deliberate selection. Nominal and ordinal variables were observed in the questionnaire. Nominal variables were described by means of artificially (arbitrarily) created codes, which were assigned to individual categories and related to respondents' academic rank divided into assistant, assistant professor, associate professor, professor, lecturer and other options, as well as the designation of the field of study and the country in which the educational activity is carried out. Ordinal variables were characterized by the five-point Likert scale. The Likert scale of ordinal variables was used for student types in terms of Fleming's VARK model and selected learning models. [1] To analyse the results, we used the opinions of 194 respondents from three countries, i.e. the Slovak Republic, the Czech Republic, and the Hellenic Republic. The research sample in terms of the country and field of study is described in contingency Table 1.

**Table 1.** *Description of respondents by country and field of study*

| Field of study                      | Number of respondents from country |                |                   | Total |
|-------------------------------------|------------------------------------|----------------|-------------------|-------|
|                                     | Slovak Republic                    | Czech Republic | Hellenic Republic |       |
| Economic, social and legal sciences | 33                                 | 31             | 31                | 95    |
| Education                           | 34                                 | 32             | 33                | 99    |
| Total                               | 67                                 | 63             | 64                | 194   |

Source: own processing.

The research was conducted in the period from February 2023 to end April 2023.

The data collected were then analysed in the statistical software Jamovi Version 4.1 and MS Excel. To analyse data, we used contingency tables, and descriptive statistics in this paper. Results of statistical processing are presented in statistical surveys in tables and the findings are interpreted.

## RESULTS OF EMPIRICAL RESEARCH

In the empirical research the focus was on respondents' opinions of types of learners (in terms of LS), who pursue formal university education. Learner types in terms of Fleming's VARK model and the Likert scale (0-5) are characterized in Table 2.

**Table 2.** *Respondents' opinions of learner types by selected countries*

| Country           | Indicator | Learner type |                 |          |             |
|-------------------|-----------|--------------|-----------------|----------|-------------|
|                   |           | Visual       | Reading/Writing | Auditive | Kinesthetic |
| Czech Republic    | Average   | 4,06         | 3,33            | 3,79     | 3,35        |
|                   | Median    | 4            | 3               | 4        | 3           |
|                   | Modus     | 5            | 3               | 4        | 5           |
| Slovak Republic   | Average   | 3,73         | 3,43            | 3,81     | 3,09        |
|                   | Median    | 4            | 3               | 4        | 3           |
|                   | Modus     | 5            | 3               | 4        | 5           |
| Hellenic Republic | Average   | 4,11         | 3,38            | 3,72     | 3,25        |
|                   | Median    | 4            | 3               | 4        | 3           |
|                   | Modus     | 5            | 3               | 4        | 5           |

Source: results of empirical research (evaluation in 0-5 interval, according to assumed number of occurrences)

The modus (or mode) characterizes the most frequently occurring value of student types. Based on the data from the calculation of the modus and median, it can be concluded that the types of students are the same in all the three countries of the sample. Most students belong to visual and kinesthetic types, followed by the auditory learner type, while the least common in the respondent sample is the reading/writing learner type. Based on the research, we conclude that neither the territory nor the field of study affects the composition of students in terms of learning style.

The following table lists the modus of value in the interval (0-5), which describes the level of applying a given learning style.

**Table 3.** *Selected learning styles and models of learning in formal university education (the table lists the modus of results)*

| Country                            | Czech Republic |   | Slovak Republic |   | Hellenic Republic |   |
|------------------------------------|----------------|---|-----------------|---|-------------------|---|
| Field of study                     | A              | B | A               | B | A                 | B |
| LS models                          |                |   |                 |   |                   |   |
| Curry Onion Model                  | 1              | 3 | 1               | 2 | 1                 | 3 |
| Riding & Cheema's LS taxonomy      | 1              | 1 | 1               | 1 | 1                 | 1 |
| Rayner & Riding's taxonomy         | 1              | 1 | 1               | 1 | 1                 | 1 |
| Myers & Briggs' model              | 1              | 1 | 1               | 1 | 1                 | 1 |
| Kolb's Experiential Learning model | 1              | 3 | 1               | 1 | 1                 | 3 |

Source: Results of own empirical research. Field of study: A – Social, economic and legal sciences; B–Education

Based on the research results, it can be concluded that the selected LS models are applied at a very modest level. In the Social, economic and legal sciences field of study, the application of the learning models is evaluated based on the modus, and their frequency of occurrence achieved the modus value of 1. In the study field of Education, the Curry Onion model and Kolb's Experiential Learning model are used to a greater extent in the Czech Republic and the Hellenic Republic, where the modus value 3 was most often reported. In the case of the Slovak Republic, the most frequent occurrence of application was reported in the case of the Curry Onion model that achieved value 2. The other styles were assigned mode value 1.

## CONCLUSION

Based on the calculation of the modus and median, it can be concluded that in all the three countries the types of learners (distinguished in terms of Fleming's VARK learning styles) are the same: most students belong to visual and kinesthetic types, followed by the auditory learner type, and the least common is the reading/writing learner type. Further, we conclude that neither the territory (country) nor the field of study affects the composition of students in terms of learning style. The analysis of respondents' replies in questionnaires shows the Curry Onion model and the Kolb Experiential Learning model are used to a greater extent in formal university education in the Czech Republic and the Hellenic Republic; the Curry Onion model was reported to be the most frequently applied model in the Slovak Republic.

Despite their popularity and wide spread in the world, learning styles theories stand for a controversial issue. On the one hand, they offer variability and recognition for learner's preferences; on the other hand, these theories have been criticized for the failure to provide a clear proof that the consideration of learner's style of learning can result in improving the quality of education [14].

However, there are reasons to believe that other factors apart from those analysed in the paper (country, field of study, and application of LS models) may have contributed to the wide spread of approach based on learning styles. In our future studies on learning styles, we would like to deal with these factors [15] as well as with the application of LS theories in meta-learning, since we believe that the awareness of one's preferred learning style in the context of the learning environment and the content of learning can increase the learner's involvement efficiency of learning, both in the case of individual learners as well as learning teams.

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# PERCEPTION OF VIRTUAL ENVIRONMENT AS A SPACE FOR EDUCATION

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## ABSTRACT

Virtual worlds, like Second Life, are transformative innovations in education. These immersive 3D environments offer teachers and students unique opportunities beyond traditional classrooms. They foster active learning, allowing students to interact, manipulate objects, and engage with diverse content. This multimodal approach accommodates various learning styles. The research method used in this paper is content analysis, examining elements in Second Life, including text, visuals, landmarks, and simulations. Findings are applicable to other virtual environments. Integrating virtual worlds into education presents challenges, including a learning curve, technology requirements, and concerns about data security and distractions. Despite these challenges, virtual worlds offer powerful educational experiences when used wisely. They have the potential to redefine education in the future.

**Keywords:** *3D virtual classroom, blended learning, interactive learning spaces, second life, virtual learning environment*

## INTRODUCTION

In the modern era, we are introduced to virtual environments, often characterized by some as social networks – online platforms predominantly designed for communication. At their core, these online multi-user virtual environments facilitate interaction amongst users in diverse ways. Virtual environments most frequently manifest as social networks. However, other variants, while resembling online multiplayer games in allowing user interactivity, might lack certain gaming elements, making them more aptly termed virtual worlds.

Perceptions of virtual worlds vary: some view them as games, while others argue the opposite. These platforms offer a plethora of opportunities, from education and personal growth to social communication, leading to the formation of interest-based groups or simply serving as experimental spaces. User experiences in these environments are subjective, with the virtual world's impact differing based on the user's emotional and behavioral disposition. Some individuals engage in virtual worlds as a form of vicarious living, seeking experiences unattainable in their real lives. Engaging in virtual worlds often reflects a desire for escapism, providing experiences absent in everyday reality.

## **VIRTUAL ENVIRONMENT SECOND LIFE AND ITS ASPECTS**

Second Life stands out amongst virtual worlds, boasting over 64 million registered users and roughly 1 million active participants. Within Second Life, users can modify terrains, construct intricate 3D objects either natively or using external tools like Blender or ZBrush. Texturing can be performed using software such as Photoshop. These objects can then be infused with functionality using Linden Scripting Language (LSL).[7]

R. Bartle posits that the allure of virtual worlds lies in the entertainment they offer, enticing users to immerse themselves, escape reality, and craft new virtual identities. T. Boellstorff extends this thought, suggesting that active "Second Life" users are not just participants but also creators, shaping the virtual space through content creation, workshops, learning LSL, and fostering education. In line with this, T.A. Mikropoulos and A. Natsis argue that virtual environments offer avenues for skill development, with 3D virtual learning proving effective as it capitalizes on repetition, aiding memory, and knowledge acquisition.[3][8]

In a scientific context, R. Bartle characterizes virtual worlds as environments under the immediate influence of individual users. The environments are dynamic, changing based on user interactions. Bartle suggests that the entertaining nature of virtual worlds leads users to perceive them as computer games, wherein they seek refuge from reality and craft alternate identities.[2] T. Boellstorff extends Bartle's perspective, positing that users of the virtual environment Second Life engage in content creation as a skill enhancement endeavor. He believes that these platforms provide an avenue for those who might not have outlets in the real world to produce content that educates and aids others in navigating the virtual space.[3] T. Boellstorff categorizes virtual interactions into cognitive, communicative, and narrative structures. The cognitive framework emphasizes users' education and skill development, allowing for content creation from programming to animation. The communicative structure underscores user interactions and relationship establishment. The narrative structure, as per T. Boellstorff, revolves around a storyline, whether based on fact or fiction, constructed by the creators, but heavily influenced and modified by the players' actions and choices.[3] R. Freedman views Second Life as an optimal setting for virtual business endeavors with tangible profits. Within this ecosystem, users can fashion virtual items, market them, and subsequently convert sales into real currency, contingent on demand and sales volume.[5]

All three researchers concur that Second Life mirrors various aspects of real life, emphasizing its educational potential. The platform facilitates awareness of global matters, in-depth topic analysis, and networking via built-in search tools or external integrations with platforms like Facebook and Flickr. The allure of Second Life revolves around social engagements and the possibility of forging educational communities. Its cognitive domain concentrates on the accrued

knowledge during one's virtual tenure. The vast expanse of opportunities includes challenges, accomplishments, and diverse entertainment forms. This platform offers holistic growth avenues ranging from computer science intricacies to arts, history, geography, and medical science.

Engaging in these multifaceted activities allows users to assimilate valuable insights from peer experiences and creations. The platform's foundational element is communication, crucial for user engagement.[5] Through community interactions, friendships are fostered, which can culminate in collaborative ventures. By pooling diverse skill sets, communities can achieve what individual users might not. Initially conceptualized as a social platform, Second Life has evolved into an educational hub. Various educational institutions have invested in virtual campuses, facilitating a plethora of activities, from distance learning to historical recreations and cultural events.

The integration of virtual platforms such as Second Life in educational settings is a topic of interest for both educators and instructional technologists. Second Life resonates with the constructionist learning philosophy, an approach asserting that individuals build knowledge through experiences coupled with reflection. Within Second Life, users engage in simulations, providing immersive experiences that can facilitate deeper understanding. As posited by H. Asleitner and C. Wiesner, engaging in the platform's building tasks enhances visual literacy. This is facilitated by the utilization of primary geometric shapes, colloquially termed prims. These foundational volumes, such as cubes, pyramids, and spheres, offer the baseline for construction. Nonetheless, this modality of creation has been supplanted in some instances, with advanced tools like Blender enabling the design of more intricate geometric objects.[1] Once crafted, these objects can be imported into Second Life, where textures can be applied to produce multifaceted assets. The platform promotes social interactions, aligning with the social constructivist view that posits learning as a social endeavor. A salient perspective, perhaps unfamiliar to some, concerns motivation within virtual learning environments.

To conclude, while Second Life offers an array of advantages for innovative educational endeavors, educators must weigh these benefits against potential technical and logistical challenges.

## **METHODOLOGY**

The research in this paper employs a methodological approach centered on the systematic processing of existing secondary sources. The study's primary objective is to conduct a comprehensive analysis of virtual environments, drawing upon illustrative examples extracted from the collected data. The findings derived from this analytical process serve as the foundation for constructing an informative and scientifically rigorous narrative. This narrative provides insights into the perception of specific virtual environments, particularly Second Life, and

establishes a broader context that can be generalized to extend the boundaries of other virtual landscapes within the purview of educational research.

## **VIRTUAL ENVIRONMENT SECOND LIFE AND ITS ASPECTS**

Loyalist College stands as a testament to the innovative use of Second Life in an educational paradigm. In a training module designed to hone the interview techniques of border guards, the college successfully employed a virtual simulation. According to data from Linden Lab, the results were emphatic. Prior to the incorporation of the simulation, student success rates on critical skills tests stood at a mere 56% in 2007. Post-implementation, this figure soared to an impressive 95% by the end of 2008. The resounding success of this initiative spurred engagement from over 650 students and eight faculty members, all venturing into Second Life for diverse educational pursuits. [6]

The allure of the virtual milieu, propelled by digital games and social media, remains irresistible, particularly to the younger demographic. Given this trend, educators are increasingly recognizing the potential of integrating such platforms into pedagogical strategies. As elucidated by A. Thomas in his 2018 TED Talk, conventional educational methods often fail to provide experiential learning. He contrasts the palpable, playful learning in kindergarten with the impersonal lectures of tertiary education. Advocating for the inclusion of games in the academic curriculum, A. Thomas cites examples of games aiding cancer-stricken children, facilitating scientific research, and illuminating historical epochs.

Furthermore, the expansive horizons of virtual platforms offer myriad educational opportunities. These platforms allow for immersive, hands-on experiences unhindered by geographical constraints. Second Life, as highlighted by Professor L. Falconer from the University of the West of England, stands as a paradigmatic example. Here, learners can navigate a vast array of simulated activities, epitomizing the educational potential of cyberspace.[4] A noteworthy illustration of Second Life's educational utility can be observed in the Geographic Information Systems (GIS) course offered by New Mexico State University. In this instructional setting, students collaborate within teams to construct a virtual realm referred to as "Earth Aggie Island." Within this virtual landscape, students engage with their instructor in a digital realm and undertake the task of generating three-dimensional models and various animations. This immersive approach serves as an effective pedagogical strategy to enhance comprehension of GIS principles and software manipulation.[4]

Second Life, in addition to its multifaceted applications, serves as a platform conducive to language instruction, capitalizing on the advantages of spatially unrestricted interaction among students and instructors. Instances of such language-focused applications within Second Life include Second Life English and British Council Isle, both of which offer complimentary English language

instruction accessible to youth worldwide. Notably, English courses have been available within this platform since 2008, and they are also offered in specialized environments tailored to specific linguistic contexts, such as the Czechoslovak region of Second Life.

Moreover, the digital domain affords opportunities for simulating activities that would be either infeasible or excessively resource-intensive within physical spaces. Consider the organization of exhibitions: while logistical constraints in the real world might impede the acquisition of requisite exhibits or props, a virtual representation can faithfully capture the essence of the event and convey substantial information, if not more, while incurring only a fraction of the associated costs.[1]

In recent years, Second Life has undergone a perceptible transformation, evolving into a predominantly social platform primarily oriented towards communication and socialization. The prevalence of traditional universities establishing a presence within the virtual realm has diminished relative to previous years. The underlying reasons for this phenomenon are multifaceted, and it is unlikely that a singular factor can fully elucidate this shift. Plausible explanations encompass the exploration of alternative, emerging platforms as well as the observation that Second Life is now predominantly frequented by individuals with a heightened emphasis on social interaction.

According to educators actively engaged within the Second Life environment, a significant proportion of universities retreated from their virtual ventures when the platform's community began to shift its focus towards fantasy-oriented activities, notably role-playing games characterized by mature and even adult themes that diverge from the academic and instructional orientation, veering more towards recreational entertainment.[9]

In 2019, Linden Lab, the company behind Second Life, initiated a concerted effort to reinvigorate the educational dimension of the platform. This endeavor manifested in the "Made in Second Life" series, which was showcased on their official YouTube channel. One featured project within this series was the Chant Newall Development Group, a collaborative endeavor between the University of Central Florida and Florida State University. This interdisciplinary initiative delved into various scientific domains, notably biology, economics, chemistry, and environmental sciences. Students leveraged Second Life as a pedagogical tool to elucidate complex concepts, such as the intricate structures of human cells and the practical applications of forensic science.[7]

Additionally, the series spotlighted artists employing Second Life as a canvas to exhibit their innovative, millennial-inspired creations, thus affording a distinctive and unconventional perspective on their artistic oeuvre. Furthermore, the series featured artists who designed their own avatars, demonstrating the platform's capacity for creative self-expression. As part of its commitment to

advancing education, Linden Lab has instituted a program wherein schools actively participating in the establishment of virtual regions representing educational institutions receive a substantial 50% reduction in region fees.

In addition to this cost-saving incentive, a subscriber list and dedicated communication channels have been established to facilitate engagement between educators and the broader Second Life community.[7] This resource is open to educators seeking to employ Second Life as an instructional platform, irrespective of whether their respective institutions maintain a virtual presence within the platform.

Several universities have demonstrated enduring commitment to active pedagogical engagement within Second Life, amassing a history of teaching in this virtual domain spanning a decade or more. Notably, Rockcliffe University Consortium is one such institution exemplifying this dedication, with a specialized online entity directed towards exploring technological advancements in education and their practical implementation within the virtual realm. This university occupies a virtual territory replete with comprehensive facilities, including a central university edifice, multiple lecture halls, conference rooms, classrooms, laboratories, lounge areas, outdoor spaces, and libraries.

Distinctively, Rockcliffe University Consortium extends accessibility to its educational offerings to both enrolled students and adult learners keen on acquiring knowledge in the realm of technology. Furthermore, this institution actively fosters a culture of support for educators who may not be affiliated with the university but are interested in delivering instructional content. To this end, Rockcliffe University Consortium has established open access courses accessible to all interested parties, thereby democratizing the dissemination of knowledge.[7] The virtual infrastructure provided by Rockcliffe University Consortium extends to a valuable resource: a free sandbox environment. This sandbox empowers members to experiment with and prototype novel ideas and innovations, thereby cultivating an environment conducive to creative exploration and technological development.

In the year 2009, the University of Western Australia (UWA), undertook a remarkable initiative by recreating its physical campus within the virtual realm of Second Life. This endeavor aimed to extend an immersive experience to residents hailing from diverse geographical locations, allowing them to immerse themselves in the university's distinctive environment.[7] Renowned for its opulent biodiversity, which the university equally prides itself on in the tangible world, the virtual campus faithfully replicates this ecological diversity. Creators of this virtual manifestation have thoughtfully incorporated indigenous flora and fauna that populate the university's actual geographical location. Furthermore, various recreational and contemplative spaces have been thoughtfully integrated into the virtual campus, affording opportunities for relaxation and meditation.

The University of Western Australia, both in the tangible and virtual realms, is celebrated for its vibrant academic pursuits, rigorous research initiatives, dynamic teaching programs, and engaging social activities. These activities are made available to virtual residents on a weekly basis, contributing to a rich and interactive educational environment. The educational focus within Second Life extends to a diverse array of disciplines, encompassing fields such as business, law, art, anatomy, education, and biology.[7] UWA actively conducts lectures for both its student body and the public, with a weekly schedule accessible within the virtual realm. Beyond its primary educational mission, UWA also organizes themed social events featuring live music, which are inclusive and open to all interested individuals. The university's virtual domain encompasses several distinct regions, including the central university building, a conference hall, classrooms, a library, a communal hangout area, and interactive information walls designed to facilitate visitor exploration and engagement.

Another noteworthy exemplar of a vibrant university presence within Second Life is Stanford University, distinguished by its remarkable collection of virtual libraries and archives that faithfully replicate real-world repositories. Second Life serves as the exclusive platform through which the public can access Stanford's extensive collections, including manuscript holdings that are typically restricted to authorized staff members in the tangible world.[7] The Stanford region within Second Life is organized into distinct areas, including museums, libraries, archives, and an outdoor space replete with informational panels. This virtual realm offers scanned reproductions of genuine documents for perusal, and users can navigate the entire region with the assistance of guided tours, facilitated by a virtual train. Notably, the region provides access to materials held within Stanford libraries and archives that remain inaccessible to the global populace outside of Second Life.

## CONCLUSION

In summary, Second Life has emerged as a prominent virtual world with millions of users worldwide. It offers a dynamic platform for creativity and learning, where users can construct 3D environments, interact with others, and engage in educational activities. Researchers like R. Bartle and T. Boellstorff have recognized the appeal of virtual worlds, highlighting their potential for entertainment, identity exploration, and education. Second Life has become a hub for active learning, where users can create, collaborate, and develop skills.

The integration of virtual worlds in education has been exemplified by institutions like the University of Western Australia and Stanford University. These universities have recreated their campuses in Second Life, providing immersive educational experiences and fostering communities of learners. Despite its advantages, the use of virtual worlds in education comes with challenges, including a learning curve and technical requirements. However, the



potential for experiential learning, global awareness, and collaborative opportunities makes Second Life a promising platform for innovative education.

In conclusion, Second Life and similar virtual worlds offer a unique and valuable space for education, where users can explore, create, and connect in ways that transcend traditional learning environments. As educators continue to explore these possibilities, the future of education may be shaped by the immersive experiences and collaborative opportunities that virtual worlds provide.

## ACKNOWLEDGEMENTS

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# **THE PHILOSOPHY OF EDUCATION IN EMPOWERING COMMUNITIES - FROM ANCIENT GREECE TO EDUCATIONAL TECHNOLOGY**

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## **ABSTRACT**

This report embarks on an exploration of the profound role philosophy has played in shaping education across various historical epochs, commencing with an investigation into the history and fundamental purpose of education. Philosophy has consistently served as a cornerstone, propelling the refinement of learning and teaching methods while actively contributing to curriculum development. It delves into the overarching aims and values of education, emphasizing its persistent objective of enhancing the quality of life, encompassing cultural, social, and economic values. Furthermore, this report analyzes the rationale behind implementing effective teaching Pedagogy and Andragogical theory, underscoring their pivotal roles in facilitating meaningful learning and comprehensive development. It also scrutinizes how the methodologies of ancient philosophers continue to influence contemporary educational practices, providing insights into their impact on modern teaching methods and curriculum design. Lastly, the report explores key theories of education and learning, elucidating their practical application in pedagogical contexts.

**Keywords:** *Philosophy of Education, Curriculum Development, Teaching Pedagogy, Ancient Philosophical Methodology, Educational Theories and Learning*

## **INTRODUCTION**

Education is widely recognized as a cornerstone in the foundation and preservation of human civilization (Boyd, 1947, p.26) [1] Attempting to trace the origins of every civilization may prove an exceedingly intricate task. Therefore, this report sets its initial focus on one of the pivotal civilizations that have significantly shaped the contemporary world – the Greek civilization.

Within the annals of Greek civilization, numerous philosophers embraced the intrinsic value of education, each offering unique perspectives on its significance. These philosophical ideals found resonance in the MENA (Middle East and North Africa) region, where scholars and intellectuals remained profoundly influenced by Greek philosophical thought, integrating its principles into their educational frameworks.

As William Boyd posited in 1947 [1], there have been three notable epochs of educational development in European history. The first of these occurred during the Greek era, marked by profound intellectual exploration and the cultivation of knowledge. The subsequent periods transpired at the close of the Middle Ages, during the Renaissance, and following the French Revolution, each representing distinct epochs of educational reform and evolution.

Before delving into the historical evolution of educational practices, it is imperative to establish a common understanding of the fundamental terms and concepts that underpin the field of education.

### **The Meaning and History of Education**

Education represents a lifelong process, fostering continuous learning, knowledge acquisition, cognitive enhancement, and behavioral transformation. It empowers individuals to actively contribute to the advancement of the collective world and sustainable development. Additionally, education nurtures self-confidence and the ability to articulate thoughts, ultimately enabling individuals to play meaningful roles in their communities, thus creating further opportunities (Ignou, 2017, p.6) [3].

The etymology of the word "education" offers valuable insights. It originates from the Latin words 'e,' meaning 'out of,' and 'duco,' signifying 'I lead.' Consequently, education can be interpreted as the act of leading out or drawing out one's potential (Ignou, 2017) [3].

In a broader context, education encompasses diverse categories, most notably formal and non-formal education. Formal education, often referred to as schooling, constitutes a structured and hierarchical learning system culminating in the attainment of qualifications upon the completion of an academic journey within educational institutions, guided by teachers, principals, and dedicated professionals. In contrast, non-formal education extends learning opportunities to adults who autonomously identify their knowledge needs and access resources accordingly. Furthermore, young learners engage in non-formal education under the supervision of guardians (Barkan, 2010, p.598) [4].

The significance of questioning within the realm of education cannot be underestimated. Questioning serves as a catalyst for critical thinking, fueling curiosity, and promoting problem-solving skills. Nevertheless, the role of questioning has been the subject of ongoing debate, particularly between philosophy, often considered the cornerstone of all scientific disciplines, and educators. Historically, professional philosophers and educators have navigated academic landscapes as relative strangers. Educators sometimes struggle to discern how general philosophers, who may not provide definitive answers akin to the sciences, can shed light on educational matters (Schofield, 1972, p.2) [5].

## Philosophers' Perspectives on Education

The enduring relationship between philosophy and education remains inseparable, evolving through various historical epochs and adopting diverse perspectives and practices. This enduring alliance between philosophy and education has long aimed to empower individuals, inspiring them to engage in critical thinking, make independent choices, and exercise autonomy in decision-making.

The term "philosophy" itself, originating from the Greek word "philosophia," is a testament to this synergy. "Philo" denotes "loving" or "love of," while "Sophia" signifies "wisdom." In essence, philosophy represents the "love of wisdom" (Nicholson, 2022, p.11) [2] With this profound connection between philosophy and wisdom in mind, we delve into the methodologies employed by various philosophers throughout history and explore how these methodologies have significantly shaped the landscape of education.

Nicholson, D. (2022) *Philosophy of Education in Action*. 2nd ed. Taylor and Francis, p.11 [2], provide valuable insights into the enduring relationship between philosophy and education, offering a deeper understanding of how philosophy, as the "love of wisdom," has influenced the development of educational practices and theories.

### Socratic Thinking (Socrates c.470 BCE - 399 BCE)

Socrates, widely revered as the father of Western philosophy, occupies an iconic position in the annals of philosophical thought. His profound contributions extended beyond mere philosophical discourse, encompassing the realm of education. Central to Socratic philosophy was the conviction that education held immense potential to nurture and refine individuals. He firmly believed that knowledge was a collective inheritance of humanity, and the pursuit of wisdom and virtue should be inseparable, as true wisdom necessitated moral virtue (O'Connor, 2015, p.79) [6].

A succinct yet insightful description of Socratic education, one that refrains from portraying Socrates as a traditional teacher, is offered by Xenophon (*Memorabilia* 1.2.2–3). According to Xenophon, Socrates instilled in his associates a fervent desire for virtue and kindled within them the hope that through self-care and self-improvement, they could attain nobility and moral goodness (O'Connor, 2015, p.79) [6].

Furthermore, Socrates pioneered what can be termed an "oral culture" in his educational approach, centering on the art of dialogue to elucidate fundamental concepts. His pedagogical method revolved around the art of questioning and encouraging his interlocutors to participate actively in the exchange of ideas. This dialectical approach, epitomized in dialogues like the *Euthydemus*, assumed a

pivotal role in Socratic education, offering a valuable platform for intellectual exploration and growth (Scott, 2000, p.44) [7].

Socrates, through his innovative pedagogy rooted in dialogue and inquiry, left an indelible mark on both philosophy and education, shaping the way we engage with knowledge and moral principles to this day.

#### Plato's Influence on Education (428 BCE - 348 BCE)

Plato, renowned for his philosophical endeavors, dedicated much of his life to upholding the legacy of his mentor, Socrates. Socrates, whose life ended tragically with a death sentence for charges of impiety, had profoundly impacted the intellectual development of Athenian youth. Plato, deeply committed to preserving Socrates' teachings, took a monumental step by founding what is often regarded as the earliest European university, the Academy.

The Academy, founded by Plato, holds historical significance as a pioneering institution of higher learning in Greece. Plato's visionary commitment to advancing knowledge and facilitating its dissemination led to this institution, which played a pivotal role in the evolution of European education. Notably, the Academy welcomed female students—a progressive stance in an era marked by limited educational opportunities for women.

Within the precincts of the Academy, a comprehensive curriculum encompassed a wide array of subjects, with a distinct focus on mathematics, astronomy, and geometry. Plato's educational philosophy extended beyond empirical knowledge; he recognized the value of imagination as a pedagogical tool, fostering analytical skills and creative thinking among his students.

One distinctive aspect of Plato's educational approach involved the use of imaginary scenarios, a precursor to contemporary case studies. Plato challenged his students to engage in critical analysis by envisioning intricate situations and evaluating the inherent advantages and disadvantages. This innovative use of imagination enriched the educational experience and laid a foundation for subsequent pedagogical methods.

Plato's enduring contributions to education exemplify his unwavering dedication to the pursuit of wisdom and knowledge. His legacy continues to influence educational philosophy and practice, leaving an indelible mark on the evolution of pedagogy (Murphy, 2015, p.10) [8].

#### Ibn Rushd / Averroes (1126 - 1198): A Pioneer in Theoretical and Practical Education

Ibn Rushd, also known as Averroes, stands as a prominent figure in the history of education and philosophy. His life and philosophical contributions were

primarily situated in North Africa and Muslim Spain. Ibn Rushd's philosophical underpinnings were deeply rooted in Greek philosophy, and he played a significant role in fostering educational opportunities, notably advocating for the education of women. His philosophy was characterized by a harmonious synthesis of theoretical knowledge and practical application.

Central to Ibn Rushd's educational philosophy is the assertion that scriptural teachings serve a dual purpose. According to him, these teachings provide humanity with not only theoretical knowledge to explore the fundamental truths of existence but also practical knowledge to guide individuals in leading sincere and purposeful lives (Kadi, 2016, p.258) [9].

In the context of our discussion on the evolution of educational thought, Ibn Rushd's emphasis on the combination of theoretical and practical knowledge resonates with the broader historical development of educational philosophies.

This holistic perspective, spanning Greek, Islamic, and European traditions, reflects the timeless endeavor to nurture well-rounded individuals equipped to engage meaningfully with the world and its challenges.

The philosophies of influential thinkers like Socrates, Plato, and Ibn Rushd have left a lasting imprint on modern teaching philosophies and practices. These enduring ideas, rooted in critical thinking, creative teaching, and holistic education, continue to shape

As a direct consequence of the profound influence exerted by philosophers, it becomes imperative to explore the fundamental aims and values that underpin the educational process.

### **The Aim and Values of Education**

In the rapidly evolving global landscape, marked by dynamic changes and emerging challenges, the imperatives of our time necessitate a concerted effort characterized by creativity, courage, and determination. These attributes are indispensable for effectively addressing contemporary challenges and rising to the occasion (Zajda & Daun, 2009, p.22) [10].

As a response to this evolving context, it becomes evident that educational reform initiatives, both on national and international scales, must transcend mere conventional planning and financial resource allocation. The fundamental objective of these reform policies should be the attainment of educational excellence (The Delors Committee Report, p.193) [19].

Education, guided by its foundational principles of equality and empowerment, assumes a multifaceted role in the modern era. It serves as a catalyst for societal equality by dismantling barriers and championing inclusivity,

ensuring equitable access to quality education for all members of society. Concurrently, education empowers individuals by furnishing them with essential skills and knowledge, enabling them to actively engage in their communities and make well-informed decisions. In a world characterized by rapid transformations, education fosters adaptability and resilience, equipping individuals to effectively meet the complex demands of contemporary life.

Furthermore, values education, to be genuinely meaningful and authentic, necessitates a heightened emphasis on community involvement, a pronounced focus on social critique, and a profound, critical comprehension of essential societal values, including democracy, equality, human rights, and justice (Zajda & Daun, 2009, p.22) [10] In educational settings where values education and critical literacy are integrated, it is essential that values are not imposed but rather subjected to open and deliberative discussions. This approach underscores the importance of reasoned discourse and reflection in fostering a morally upright society where ethical principles and virtues are upheld collectively

In summary, education, as a driving force for societal progress, plays a pivotal role in promoting equality, empowerment, adaptability, and resilience in the face of a rapidly changing world. It is incumbent upon educational reform efforts to align with the central goal of achieving educational excellence, recognizing the transformative potential of education in shaping a better future for all (The Delors Committee Report, 193; Zajda & Daun, 2009, p.22) [19], [10].

Within the realm of education's influence on social cohesion, Zebun Nisa Khan (2016) [14] emphasizes the pivotal role of instilling citizenship principles as a means to bridge societal divides among individuals from diverse backgrounds (Khan, 2016, pp. 23-26) [14]. This objective of enhancing social cohesion can manifest practically through classroom and schoolyard activities.

Moreover, education plays a critical role in the economic domain, with significant ramifications for employment and income. In various nations, individuals with higher educational qualifications tend to secure positions of prestige and receive commensurately higher wages compared to their less-educated counterparts. Furthermore, numerous countries have recognized the strategic importance of investing in education, particularly to cater to emerging industries such as artificial intelligence, water resource engineering, and cybersecurity.

As highlighted by Catherine Grant (2017) [12], comprehensive secondary education and universal primary education have the potential to uplift economically disadvantaged countries by providing the requisite human capital to lift substantial portions of the population out of poverty (Grant, 2017, p. 13) [12]. Additionally, tertiary education assumes a pivotal role in propelling economic growth and development, particularly for the younger demographic.



In summary, education's contributions to both social cohesion and economic advancement are undeniable. It serves as a catalyst for fostering unity and bridging societal disparities, while concurrently fueling economic progress by equipping individuals with the competencies and knowledge essential for personal and national prosperity.

Investors often view the education sector as one of the burgeoning industries, primarily due to its recognition as a foundational necessity for societal development. As part of the research for this report, a Zoom interview was conducted with Dr. Ahmed Ibrahim, Vice President of the Future Education Holding Company in the UK, a seasoned expert in the field of education boasting over twenty-five years of experience in management and consultancy.

Dr. Ibrahim's extensive career has spanned diverse educational sectors, including vocational training, further education, and higher education, both in the UK and the MENA region. Drawing from his wealth of experience, Dr. Ibrahim highlighted the immense profitability of the higher education sector. He emphasized its substantial demand, particularly in the Middle East, where there is a fervent drive among Arab nations to advance their countries and compete on a global scale with more developed nations. This insight underscores the significance of higher education as a pivotal driver for societal progress and economic development, aligning with the broader theme of education's multifaceted role in contemporary society.

In the pursuit of understanding the dynamic interplay between education and the evolving challenges posed by the COVID-19 pandemic, this study distinctly focuses on the MENA region. The insights presented in this table, derived from an extensive analysis by the author, originate from the perspectives of educators in this region.

| Strengths  | Weakness   |
|--|--|
| Investments are increasing significantly in the educational sector, especially in higher education.  | Education is still not accessible to everyone, especially in remote communities.   |
| Educators became more aware of the importance of regular training and teacher training qualifications.   | Many educators are not familiar with educational technology and the mechanisms of remote teaching.   |
| Educational institutions are giving priority to creating learning management systems ( LMS), to cope with the digital age  | The curriculums are not encouraging critical thinking  |
| Arab governments have become more flexible in accepting E. learning and approving the certificates obtained for online degrees, for undergraduate and postgraduate programs. | The values of citizenship, democracy, and gender balance are still not included as valuable concepts in curriculums and discussions in classes |
| Educational institutions ensure that both students and teachers are equipped with computer devices to facilitate the learning process for everyone.                          | Quality assurance standards are not activated for many educational institutions  |

**Table 1.** *Insights derived through an analysis of responses from educators in the MENA region (Soha Tarek, 2023).[20]*

Dr. Bronwen Maxwell, Prof. Toby Greany, Kath Aspinwall, Prof. Graham Handscomb, Sarah Seleznyov, and Prof. Tim Simkins, from the University College London Institute of Education and Sheffield Hallam University (2015, p. 7) [15], emphasize that the process of engaging in inquiry can have a substantial impact on empowering teachers to cultivate a more profound comprehension of both learning and practice. Furthermore, it can lead to transformative shifts in attitudes and practices among educators.

According to a report by UNESCO in 2020, titled "UNESCO COVID-19 Education Response" (UNESCO, 2020, p. 5) [11] the tertiary education sector experienced a negative impact, with a 3.5% decline in enrollments, while pre-primary education also saw a decline of 2.8%. Interestingly, primary and secondary education departments appeared to be less affected by these changes.

In recent years, the higher education sector has embarked on the adoption of innovative theories and approaches aimed at enhancing its capacity to equip

enrolled students with the skills necessary to meet labor market demands. This strategic endeavor not only aims to benefit individual students but also seeks to make significant contributions to community development and foster economic growth.

Examining the pivotal role of education in fostering professional development, stimulating economic growth, and promoting social cohesion underscores the imperative need to enhance the implementation of effective teaching pedagogy and andragogical theories.

Building a robust learning environment represents a multifaceted endeavor that hinges upon the teacher's knowledge and expertise. The teacher's proficiency extends to understanding the current developmental level of their students, possessing a deep grasp of subject content, and wielding the most suitable strategies and structures for scaffolding. The significance of highly skilled teachers in effectively nurturing learning within educational institutions cannot be overstated. This holds true whether the teacher assumes a leadership role in the educational process (Chris Husbands and Jo Pearce, 2012, p. 8)[13]

#### Educational Pedagogies: A Comprehensive Examination of Foundational Theories

Modern learning theories have evolved from the philosophical underpinnings of ancient Greek thinkers, who sought to comprehend the mechanisms of human information acquisition and assimilation. In this section, we will explore three prominent educational theories: Behaviorism pedagogy, Cognitivism, and Humanism, elucidating their applications and ramifications within the realm of education.

**Behaviorism:** This theory revolves around the observation of students' performance and the provision of constructive feedback to enhance their learning behaviors. As articulated by John Wollard (2010, p. 21) [16] Behaviorism finds its empirical basis in meticulous observations conducted within controlled settings, such as laboratories, or specific social contexts like classrooms and workplaces.

**Cognitivism:** Cognitivism, on the other hand, places a primary focus on the acquisition and integration of information to construct a coherent understanding. This theory accentuates the symbolic activities occurring within the cognitive realms of individuals, emphasizing the connection between these cognitive representations and the external world. As elucidated by Christopher Winch and John Gingell (1999, p. 29) [17], Cognitivism underscores the significance of mental processes in learning.

**Humanism:** The Humanist educational theory adopts a student-centered approach, emphasizing the nurturing of students' competencies for personal

growth. It champions the concept of self-actualization, as noted by Paul Bélanger (2011, p. 35-36) [18] , To facilitate effective learning, Humanism employs a diverse range of activities tailored to accommodate various learning styles, including visual, auditory, kinesthetic, and reading/writing modalities. Moreover, fostering a strong rapport between educators and learners in the classroom setting fosters open communication, enabling knowledge exchange and mutual inspiration.

## CONCLUSION

In summary, this report has traced the profound impact of philosophical thought on education across various historical periods. It has explored the origins of education, its fundamental objectives, and the pivotal role played by effective teaching pedagogy and andragogical theories in facilitating comprehensive learning and development. The enduring interplay between philosophy and education, exemplified by notable figures like Socrates, Plato, and Ibn Rushd, highlights the inherent connection between wisdom and educational practices.

Education today assumes a multifaceted role in society, serving as a catalyst for promoting equality, empowerment, adaptability, and resilience in the face of a rapidly changing world. Values education, emphasizing principles such as democracy, equality, human rights, and justice, underscores the significance of rational discourse in nurturing an ethically grounded society.

An examination of the responses to the COVID-19 pandemic in the MENA region underscores the global importance of education in fostering social cohesion, economic progress, and equality. Insights from educators in this region underscore the need for equitable access to education and curriculum enhancements that encourage critical thinking and inclusivity.

Furthermore, the report explored prominent learning theories—Behaviorism, Cognitivism, and Humanism—revealing diverse approaches to effective learning. These theories guide innovative teaching practices, emphasizing education's adaptive nature to meet the evolving needs of today's learners.

In conclusion, our journey through the intertwined realms of philosophy and education highlights the enduring impact of philosophical thought on the ever-evolving field of education. Our exploration into the interconnectedness of philosophy and education, with a focal point on ancient Greek philosophies and their enduring influence, illuminates the transformative power of education within society. Just as ancient philosophers guided their students toward wisdom and virtue, contemporary education propels individuals toward critical thinking, autonomy, and meaningful societal engagement. This timeless continuum of wisdom's pursuit reaffirms education's role as a beacon of empowerment, bridging the gap between the ancient past and the technological future, all in service of enhancing lives and communities.

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# **VOICE TRAINING AS A KEY COMPETENCE FOR STUDENTS IN TEACHER TRAINING – BENEFITTING FROM A VIRTUAL REALITY CLASSROOM IN HIGHER EDUCATION. PART 1 - TEACHING CONCEPT AND FIRST RESULTS**

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## **ABSTRACT**

The project "Making voice and Presence a Virtual Realistic Experience" is funded by "HessenHub - Network digital university teaching Hessen". At the Center for Foreign Language and Occupational Competencies (German: ZfbK) at the University of Giessen, a teaching concept for student teacher training was developed that includes both the learning and use of a physiologically sound voice and offers transfer to professional practice. For this purpose, a virtual classroom featuring avatars of noisy school children was developed. The teaching concept includes exercises on breathing, posture, articulation and physiological voice enhancement at the syllable, word, sentence and text levels, up to spontaneous speech. With the help of virtual reality (VR) headsets, these exercises are to be trained and consolidated in a realistic classroom environment under the guidance of a speech scientist. The goal is for future teachers to be able to intuitively use a physiologically healthy voice that can be increased in volume without negative repercussions.

The study conducted is based on a total sample of 20 students. The methodology of the accompanying research adheres to the Scholarship of Teaching and Learning (SoTL) approach [6]. A pre-post survey on voice use and voice-influencing habits was employed to investigate improvements resulting from voice training. Additionally, a survey on VR experience and its impact was conducted at the end of the seminar, with 19 participants. Preliminary results indicate trends suggesting improvements in voice quality among most participants. The VR experience also yielded predominantly positive outcomes, and participants perceived added value in the use of VR headsets.

This study is to be considered a pilot study, as it was conducted with only 20 participants. It is necessary for future research studies to increase the sample size to obtain definitive results on the effectiveness of voice training using VR headsets.

**Keywords:** *voice training, virtual reality headset, practice transfer, pilot study, successful implementation*

## INTRODUCTION

At the Center for Foreign Language and Occupational Competencies (German: ZfbK) at the University of Giessen, a teaching concept focused on oral communication was developed, featuring the central use of Virtual Reality headsets (VR headsets). This innovative teaching model was implemented in the weekly ongoing seminar, "Voice Training for Student Teachers—Utilizing VR Headsets." This seminar, with a scope of 30 semester hours per week (German: Semesterwochenstunden, SWS), was first conducted, researched, and evaluated as a pilot project in the summer semester of 2022. The aim was to employ the VR Headsets in an efficient and sustainable manner. The relevance of this approach to voice training lies in the ability to create a realistic virtual classroom environment where student teachers can apply and practice vocal preservation techniques they have learned.

This article presents foundational concepts related to virtual reality, outlines the educational framework and its learning objectives, and discusses the methodology of the accompanying study based on the Scholarship of Teaching and Learning (SoTL) approach [6]. It also recounts initial experiences and insights gathered from the pilot study. The concluding section summarizes and discusses the results and experiences. The objective of this paper is to provide an overview of the educational framework, the application of VR Headsets, and their added value.

## BASICS OF VIRTUAL REALITY (VR)

"A Virtual Reality (VR) system is defined as a computer system equipped with appropriate hardware and software to generate the notion of a virtual reality. The content displayed through the VR system is referred to as the Virtual World, encompassing models of objects, their behavior descriptions for the simulation model, and their spatial arrangement. When a Virtual World is presented through a VR system, we refer to it as a Virtual Environment for one or more users." [3]. In recent years, Virtual Reality has increasingly permeated societal norms, finding applications in both private and commercial spheres as well as in educational contexts. The market for VR headsets is intensely competitive, with numerous providers competing to attract customers through new developments [4].

For an individual to experience a lifelike reality within a Virtual Environment, stimuli must be generated to make this world credible to the human brain. In addition to the generation of such stimuli, it is essential that the individual not only senses and observes the Virtual Environment but can also act within it (e.g., move within the space). "This necessitates the simulation of the Virtual World, where human actions are known to the simulation and can thus influence



it. The simulation's outcomes, in turn, have implications for the generation of stimuli—should the individual move within the Virtual Reality, the stimulus generation must accommodate this new position. The task of simulation can be taken over by a computer system, which must have a simulation model of the world” [3].

Even when individuals are aware that they are in a simulated environment, experiments with VR headsets have demonstrated that they can still experience physiological symptoms of fear — such as increased pulse and breathing rates — when approaching a virtual abyss [3]. Therefore, human reactions to Virtual Environments are comparable to those in the real world despite the awareness of the simulation's non-hazardous nature.

The employment of Virtual Environments has significant implications for both human perception research and various industries. For instance, in the automotive industry, new car models are first simulated in a Virtual Environment to provide planning stakeholders with increased certainty, error minimization, and thus more cost-efficient manufacturing. In pilot training, airlines can save both money and carbon emissions by initially practicing flights in a Virtual Environment [3]. Besides these applications, the use of VR headsets offers substantial opportunities for higher education, enabling students to benefit from practice and experience in virtual specialized worlds. Medical students can visually internalize anatomical basics, chemistry students can conduct virtual experiments, and student teachers can test their vocal presence before virtual school children.

## **USE OF THE DEVELOPED SOFTWARE IN VOICE TRAINING FOR STUDENT TEACHERS**

### **Teaching concept**

The teaching profession is among those where the voice is subject to maximum strain. Research has demonstrated that teachers experience voice-related issues, such as hoarseness and vocal fatigue, significantly more frequently than non-teachers [1] [9] [2] [8] [5]. Consequently, the early acquisition of techniques for healthy and effective vocalization is indispensable and a mandatory prerequisite for the sustained practice of the teaching profession.

The existing teaching concept of the seminar "Voice Training for Student Teachers" included exercises on proper breathing, posture, articulation and voice application before the method of using VR headsets was implemented. Prior to this addition, it was challenging to recreate realistic classroom situations, thereby impeding the transfer of voice exercises into professional practice. For this reason, the teaching concept was expanded to include the opportunity to practice vocal techniques using VR headsets. The advantages of employing VR headsets in voice training lie in the creation of believable virtual classroom scenarios and the

simultaneous application of learned techniques for healthy and economical vocalization. Additionally, VR technology facilitates the optimal practice of required physiological vocal enhancements when speaking in front of noisy groups of school children.

At the outset of the seminar in the summer semester of 2021, the avatars in the virtual classroom were unable to react to spoken input. Students received feedback from the instructor, who, being a speech scientist, could precisely evaluate the proper use of voice by the students. In the winter semester of 2021/22, a speech recognition system (picovoice) was installed, enabling the avatars to respond to what the students said. The avatars' responses in the virtual classroom, which cease when the students issue voice commands, do not replace the essential feedback provided by the instructor. As a speech scientist, she can offer constructive external feedback to students practicing with VR headsets. The following learning objectives were established. Students will be able to:

- understand the correlations of physiological phonetics.
- distinguish and identify features of healthy and impaired vocalization.
- differentiate and describe the functions and relationships between posture, breathing, voice, and articulation.
- identify characteristics of their own voice and apply individual exercises to improve posture, breathing, voice, and articulation.
- apply economical and prophylactic exercises in the areas of breathing, posture, and voice.
- transfer these exercises to classroom teaching situations using VR headsets.

**Table 1.** *Schedule "Voice training for student teachers - with the use of VR headsets"*

| Session | Topic   |
|---------|---|
| 1       | Course introduction; learning objectives; self and peer assessment/theory on voice. |
| 2       | Voice training; theory on breathing, posture and voice/disorders.                   |
| 3       | Exercises on breathing, posture, relaxation   |
| 4       | situation analysis; body voice training; transfer to syllable level                 |
| 5       | Body voice training; transfer to sentence level                                     |
| 6 & 7   | Body voice training; transfer to text level with VR headsets in plenary.            |
| 8       | Body voice training; enhancement of the voice                                       |
| 9 & 10  | Use power voice with VR headsets (situation noisy classroom)                        |
| 11 & 12 | Spontaneous speech exercises; voice enhancement; use with VR headsets.              |
| 13      | Voice training compact  |
| 14      | Final session   |

## PILOT STUDY

As the seminar was conducted for the first time in its new format both the concept and the technology were continually adapted based on the experiences and feedback of both the student teachers and instructors. Since the summer semester 2022 it was held three times. Therefore, a research environment with consistent conditions could not be established in the pilot run. Nonetheless, valuable and future-influencing insights were garnered through questionnaires and personal interviews.

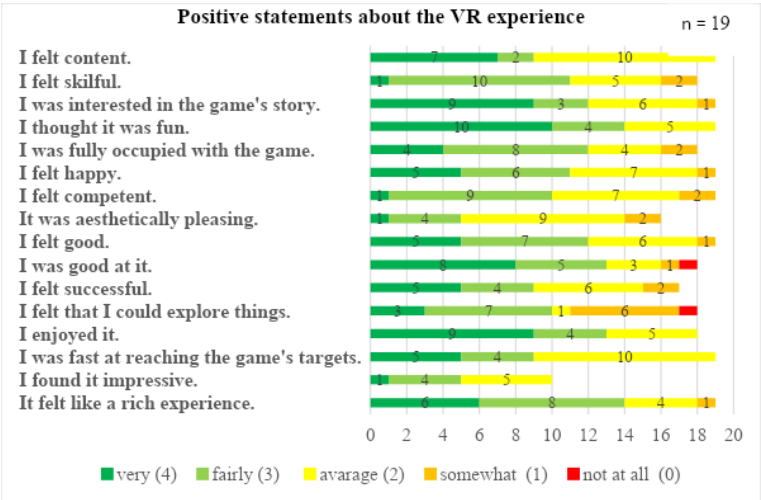
At the outset of the seminar, students completed consent forms for the use of their data and recordings within the framework of the project study and engaged with the personal perception of their own voice and possible external influencing factors. For the "Vocal Well-being" questionnaire (A1), the voice check used by the Center for Teacher Education at Martin Luther University Halle-Wittenberg was administered at the beginning and end of the seminar. A survey on the VR experience [7] (the original is attached) was also conducted at the end. Open interviews with each participant were conducted post-seminar to collect feedback on the seminar execution and concept, enabling the identification of advantages, disadvantages, and optimization measures.

### First results

Data was collected at the beginning and end of the seminar, with a sample size of  $n=20$  students. Table 1 lists the most significant reductions in the before-and-after comparison in the right column. For instance,  $\Delta = -2$  indicates that two fewer individuals reported hoarseness or a feeling of throat pressure at the end of the training compared to the beginning.

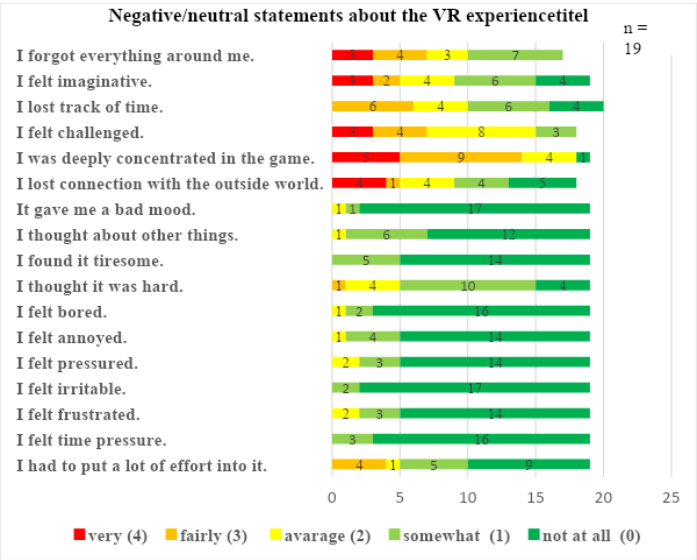
**Table 2.** Voice check (before-after)

| Indicators                                       | N of participants<br>(n=20) |       | delta |
|--|-----------------------------|-------|-------|
|  | Before                      | After |       |
| I am often lazy to speak at home in the evening. | 7                           | 2     | -5    |
| I am often hoarse.                               | 4                           | 0     | -4    |
| I often feel pressure in my throat.              | 4                           | 1     | -3    |
| I often feel tense.                              | 6                           | 4     | -2    |
| I often have to clear my throat.                 | 7                           | 5     | -2    |
| I am often asked if I have a cold or am hoarse.  | 1                           | 0     | -1    |
| I am often asked what is wrong with my voice.    | 1                           | 0     | -1    |
| The sound of my voice changes during the day.    | 5                           | 4     | -1    |
| I often find speaking stressful.                 | 1                           | 2     | 1     |
| Sometimes my voice just breaks.                  | 3                           | 4     | 1     |
| My voice is worse in the evening.                | 0                           | 2     | 2     |



**Fig. 1.** Positive statements about the VR experience

The survey on the VR experience [7] was conducted at the end of the training. It was sorted by positive and negative/neutral statements respectively. The evaluation of positive statements is presented in Figure 1 and color-coded on a scale from 0 (not at all) to 4 (very). The findings suggest that all 19 partaking student teachers predominantly rated the VR experience in the seminar as positive. Moreover, the evaluations of negative/neutral statements indicate that students associated little to no negative feelings with the VR experience.



**Fig. 2.** Negative/neutral statements about the VR experience

## CONCLUSION

Based on the empirically substantiated need for a healthy voice in teachers, a teaching concept was developed that integrated two critical components: first, the application of healthy vocal techniques, and second, practicing these in challenging classroom scenarios. In a virtual classroom filled with noisy school children's avatars, participants learned to use their voice in a healthy and conducive manner. The aim was to directly link the learned vocal techniques to professional practice, enabling student teachers to speak physiologically sound in a challenging classroom situation. The pilot study, which belongs to the Scholarship of Teaching and Learning (SotL) research area [6], relied on a pre-post survey on the use of one's voice and a survey on the effectiveness of the VR experience at the end of the seminar. Preliminary results indicate that the 20 students improved their vocal quality and overwhelmingly found the VR experience to be positive. The questionnaire on the VR experience also revealed that it was perceived very positively overall.

In subsequent studies, student teachers' individual development will be observed. They will be assigned personal codes, allowing for the relational analysis of successive questionnaires. Additionally, individual voice characteristics will be analysed and compared with indicators for subjective experience. These qualitative findings are expected to be quantitatively evaluated as the number of participants increases, leading to conclusive results regarding the efficacy of voice training with the use of VR headsets.

## ACKNOWLEDGEMENTS

We would like to thank our colleague Benedikt Klein, who advised on the content of the project, as well as our students, who demonstrated great commitment and enthusiasm in the seminar and thus contributed to the didactic and technical development. Furthermore, we would like to thank the teacher Andreas Czerney, who made it possible for us to conduct the voice recordings with the students of grades 9 and 10. We also thank them very much. Last but not least, we would like to thank the D team of the soccer club JSG Buseck-Rödgen, whose voices we were also allowed to record at the beginning of the project.

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APPENDIX

| Please indicate how you felt while playing the game for each of the items, on the following scale:☐ |                    |                    |                 |             |           |
|---|--------------------|--------------------|-----------------|-------------|-----------|
| ☐   | not at all<br>(0)☐ | Some-<br>what (1)☐ | average<br>(2)☐ | fairly (3)☐ | very (4)☐ |
| 1-I felt content.☐  | ☐                  | ☐                  | ☐               | ☐           | ☐         |
| 2-I felt skilful.☐  | ☐                  | ☐                  | ☐               | ☐           | ☐         |
| 3-I was interested in the game's story.☐  | ☐                  | ☐                  | ☐               | ☐           | ☐         |
| 4-I thought it was fun.☐  | ☐                  | ☐                  | ☐               | ☐           | ☐         |
| 5-I was fully occupied with the game.☐  | ☐                  | ☐                  | ☐               | ☐           | ☐         |
| 6-I felt happy.☐  | ☐                  | ☐                  | ☐               | ☐           | ☐         |
| 7-It gave me a bad mood.☐   | ☐                  | ☐                  | ☐               | ☐           | ☐         |
| 8-I thought about other things.☐  | ☐                  | ☐                  | ☐               | ☐           | ☐         |
| 9-I found it tiresome.☐   | ☐                  | ☐                  | ☐               | ☐           | ☐         |
| 10-I felt competent.☐   | ☐                  | ☐                  | ☐               | ☐           | ☐         |
| 11-I thought it was hard.☐  | ☐                  | ☐                  | ☐               | ☐           | ☐         |
| 12-It was aesthetically pleasing.☐  | ☐                  | ☐                  | ☐               | ☐           | ☐         |
| 13-I forgot everything around me.☐  | ☐                  | ☐                  | ☐               | ☐           | ☐         |
| 14-I felt good.☐  | ☐                  | ☐                  | ☐               | ☐           | ☐         |
| 15-I was good at it.☐   | ☐                  | ☐                  | ☐               | ☐           | ☐         |
| 16-I felt bored.☐   | ☐                  | ☐                  | ☐               | ☐           | ☐         |
| 17-I felt successful.☐  | ☐                  | ☐                  | ☐               | ☐           | ☐         |
| 18-I felt imaginative.☐   | ☐                  | ☐                  | ☐               | ☐           | ☐         |
| 19-I felt that I could explore things.☐   | ☐                  | ☐                  | ☐               | ☐           | ☐         |
| 20-I enjoyed it.☐   | ☐                  | ☐                  | ☐               | ☐           | ☐         |
| 21-I was fast at reaching the game's targets.☐  | ☐                  | ☐                  | ☐               | ☐           | ☐         |
| 22-I felt annoyed.☐   | ☐                  | ☐                  | ☐               | ☐           | ☐         |
| 23-I felt pressured.☐   | ☐                  | ☐                  | ☐               | ☐           | ☐         |
| 24-I felt irritable.☐   | ☐                  | ☐                  | ☐               | ☐           | ☐         |
| 25-I lost track of time.☐   | ☐                  | ☐                  | ☐               | ☐           | ☐         |
| 26-I felt challenged.☐  | ☐                  | ☐                  | ☐               | ☐           | ☐         |
| 27-I found it impressive.☐  | ☐                  | ☐                  | ☐               | ☐           | ☐         |
| 28-I was deeply concentrated in the game.☐  | ☐                  | ☐                  | ☐               | ☐           | ☐         |
| 29-I felt frustrated.☐  | ☐                  | ☐                  | ☐               | ☐           | ☐         |
| 30-It felt like a rich experience.☐   | ☐                  | ☐                  | ☐               | ☐           | ☐         |
| 31-I lost connection with the outside world.☐   | ☐                  | ☐                  | ☐               | ☐           | ☐         |
| 32-I felt time pressure.☐   | ☐                  | ☐                  | ☐               | ☐           | ☐         |
| 33-I had to put a lot of effort into it.☐   | ☐                  | ☐                  | ☐               | ☐           | ☐         |

# **VOICE TRAINING AS A KEY COMPETENCE FOR STUDENTS IN TEACHER TRAINING – BENEFITTING FROM A VIRTUAL REALITY CLASSROOM IN HIGHER EDUCATION. PART 2 - TECHNICAL IMPLEMENTATION**

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## **ABSTRACT**

The project "Making voice and Presence a Virtual Realistic Experience" is funded by "HessenHub - Network digital university teaching Hessen". At the Center for Foreign Language and Occupational Competencies (German: ZfbK) at the University of Giessen, a teaching concept for student teacher training was developed that includes both the learning and use of a physiologically sound voice and offers transfer to professional practice. For this purpose, a virtual classroom featuring avatars of noisy school children was developed. The teaching concept includes exercises on breathing, posture, articulation and physiological voice enhancement at the syllable, word, sentence and text levels, up to spontaneous speech. Utilizing virtual reality (VR) headsets, student teachers practice these exercises in a realistic classroom environment under the guidance of a speech scientist. The ultimate objective is to enable future teachers to naturally and physiologically modulate their voice in professional settings.

Technical implementation relied on contemporary, agile software development methodologies. After extensive online research, specific software tools were chosen for successful project execution. This paper discusses both the technical approach and the software techniques and tools employed.

**Keywords:** *voice training, virtual reality headset, technical implementation*

## **INTRODUCTION**

The objective of this article is to further explain the methodology employed for the technical implementation of the project titled "Voice Training for Student Teachers Using VR Headsets." It also describes the implemented software components and outlines the project's step-by-step realization and progressive value-added stages.

Furthermore, this article presents the fundamentals of virtual reality (hereafter abbreviated as VR) and the technical background relevant to the project. Agile software engineering methods were adopted, with Ian



Sommerville's "Software Engineering," 10<sup>th</sup> edition (2018), serving as the foundational text [1].

Dr. Nespital evaluated various VR headsets to select appropriate hardware for the project. The choice fell on Pico Neo 3 Pro [4]. Decisive criteria in favour of the unit were:

- lightweight construction of the device
- capability to run standalone applications and no need for physical connections like cables to a remote host

The VR headset operates on an Android operating system, commonly used by various smartphone manufacturers, which allows for convenient software installation via APK files.

## **SOFTWARE ENGINEERING INTRODUCTION**

Internet research indicated the absence of any existing software applications meeting the project's specific requirements, necessitating bespoke software development. Accordingly, a software development project was planned.

As Sommerville notes in his 2018 publication, software systems, being abstract and intangible, can quickly become complex, difficult to navigate, and hence challenging to maintain. To manage this complexity, the use of structured software engineering methods is essential [1].

The core activities include [1]:

- Software specification: Definitions of the software requirement and the framework for its deployment.
- Software development: Building the software using one or more software tools.
- Software validation: Ensuring that the created software corresponds to the requirements and functions error-free.
- Software maintenance: Further development and refactoring (revision of the product) of the software in order to adapt it to changing requirements.

The following product characteristics were considered when planning the software project [1]:

- Acceptability: The user of the software must be able to operate and use it comfortably and easily.
- Reliability: The software must be created to be reliable, information and operationally secure.

- **Efficiency:** The software shall be designed to be resource efficient in terms of system resources such as microprocessor utilization and memory usage.
- **Maintainability:** The software shall be developed in such a way that changes can be easily inserted, and the created software can be easily imported into the target hardware.

## **SELECTION OF THE PROCEDURE MODEL**

Various methods and paradigms exist for software development, often described in procedure models. Sommerville discusses several such models, two of which were relevant for our project [1]:

- **The Waterfall Model:** Encompasses sequential phases such as software specification, development, validation, and enhancement.
- **Incremental Development:** Iteratively runs through the steps of software specification, development, and validation until an initial product version is satisfactory.

In the Waterfall model, each phase must be completed before the next one begins. However, in practicality, these phases often overlap. Incremental development allows for greater flexibility, letting the project adapt to changes in requirements. Given the project's initial lack of detailed requirements, the incremental approach was adopted to allow for rapid and flexible responses to any changes [1].

In incremental development [1], the stages of software specification, software development, and software validation are executed in similar fashion to traditional models. However, the focus here is on defining small, manageable software packages that are individually specified, developed, and validated. Following each validation step, the project's requirements are re-evaluated based on the current state of the software, allowing for necessary adjustments

Since only rough requirements were available in this software project, the incremental approach was chosen in order to react as quickly and flexibly as possible to changes in requirements.

## **SOFTWARE SPECIFICATION**

The project aimed to create a virtual world featuring a classroom environment with avatars that can move and produce sound. From this overarching goal, the following functional requirements were distilled for software implementation:

- Virtual classroom featuring school children avatars
- Activation buttons for avatars
- Sound files and avatar movements triggered upon activation

- VR headset view projection via an external projector
- Reusability of existing development environments and assets
- Application of simple software development methods
- Scalable avatar control
- Quick VR headset update capabilities



**Fig. 1.** Virtual classroom with avatars and control buttons

Product characteristics should be considered as follows:

Acceptability:

- User-friendly buttons should facilitate avatar activation and deactivation.
- Avatars must appear lifelike.

Reliability:

- The software should operate without errors.

Efficiency:

- Seamless performance is essential - without the user noticing judder or anything similar in the VR world.
- Assets and software development tools should be used that incur as few costs (licensing costs) as possible or are reusable.

Maintainability:

- Changes should be straightforward to implement.
- Audio files should be easily integrated.
- New versions of the software application should be easy to install on the target hardware (VR headset) without much effort.

## SOFTWARE DEVELOPMENT AND SOFTWARE COMPONENTS

The conception phase took up a significant amount of time, primarily because the development team consisted of a single individual. As a result, the responsibility for the feasibility study could not be distributed. Several development tools were evaluated with the support of various vendors to determine their suitability for developing the Virtual Reality (VR) environments needed for the seminars. The feasibility study concluded that Unity VR was the most appropriate tool for the task. Its ease of learning, coupled with its flexible graphical and script-based development interfaces, made it an ideal choice. Additionally, Unity VR allows easy integration of various assets like avatars, their animations, and sound files—all crucial components for our software solution [7] [2].



*Fig. 2. Unity's real-time 3D development engine*

For the VR world's foundation, pre-developed assets like a classroom setting were purchased from Unity's asset store [7]. These assets included a classroom environment complete with tables, chairs, and other class-specific utensils.

For the creation of the avatars, the online tool Readyplayer Me [6] was best suited for our purposes. It is very easy to use, has many options to equip the avatars with many different accessories. You can customize the avatars' face shape, hair colors, hairstyles and much more. Additionally, it allows for the importation of real-person portraits to generate avatars. The created avatars are fully compatible with the Unity VR development environment and can be easily integrated therein [7].

For the avatars to move, they must be combined with software extensions called animations. For linking the avatars with already available animations, the

tool [3] was used. This platform offers a substantial library of animations that can be associated with avatar-specific files previously imported into the tool. Once modified, these files are integrated back into the Unity VR environment and can be paired with one or multiple avatars [7].

For the auditory aspect, sound files were recorded using resources from the private environment of the authors. These sound files could be easily integrated into the VR development environment.

A crucial aspect of the feasibility study was the licensing of components. While many vendors impose fees for commercial, educational, or personal use of their products, the majority of the tool providers referenced in this project were amenable to granting complimentary usage licenses. This generosity was largely because the software was intended for non-commercial educational purposes within a university setting. The sole exception was the animation vendor, who imposed a monthly licensing fee. The virtual reality (VR) world assets were purchased outright, thus eliminating any concerns over licensing for those particular components. As for the audio files, we ensured compliance with legal requirements by obtaining signed consent statements from each respective speaker.

The initial implementation of the software solution equipped participants with a dynamic training environment. In this virtual setting, users could interact with various groups of avatars modeled after noisy school children. These avatar groups were linked to different sources of loud noises, allowing participants to adjust the noise intensity in a scalable manner. Initially, participants engaged with quieter avatar groups to establish a baseline for vocal training. As the training progressed, they had the option to introduce increasingly noisy avatar groups, adding layers of complexity to the vocal challenges. This approach intensified the training experience over the course of the seminar. Additionally, participants had the flexibility to turn off individual avatar groups or all of them simultaneously via designated "stop" buttons.

### **Expansion stage 1**

To enhance the realism of the virtual environment, we activated a feature known as "spatial audio," which is natively supported by the Unity development environment [7]. Once connected to the sound sources within the environment, this feature dynamically modulates audio levels, making sounds louder as one approaches and quieter upon moving away.

### **Expansion stage 2**

Feedback collected from student teachers after the first semester revealed a key shortcoming: although the seminar enabled them to practice vocal modulation

against noisy avatars, the lack of reactive behavior from these avatars led to an unsatisfactory experience.

To address this issue, we sought a speech recognition solution that could offer reliable command recognition without significantly taxing the system's computational resources. Our research identified "Rhino" from Picovoice Inc [5] as the most fitting choice. The company provided easily comprehensible C# script examples, which were rapidly integrated into the Unity development environment for testing [7].

We customized these scripts to meet our specific requirements. Now, participants can issue vocal commands to the noisy avatars, prompting them to quiet down. This enhancement has resulted in a more engaging and efficient training environment for voice modulation.

## **TECHNICAL LIMITATIONS**

During the development and testing phases, we observed that the software's performance decreased as the number of avatars in the virtual environment increased, manifesting as black areas within the user's field of vision. Consultation with Unity's support team [7] revealed that the microcontroller within the VR headset reached its performance limits under these conditions. Subsequent tests indicated that a maximum of approximately 20 avatars could coexist within the same VR environment without performance degradation.

The application largely functions without an internet connection, save for a brief moment required for the voice recognition software, Rhino, to validate its authentication code with Picovoice's server [5].

## **CONCLUSION**

Every project typically begins with a vision—a goal or an expectation to be fulfilled. In this case, the vision was to create a virtual environment where student teachers could train their voices under expert guidance. Thanks to close collaboration between Dr. Ulrike Nespital, the seminar leader, and Gerald Czerney, the software engineer, we succeeded in bringing this vision to life.

Extensive online research led to efficient and user-friendly tools, which significantly simplified the technical execution of the project. Among these, the incorporation of the voice recognition system marked a significant advancement, enabling student teachers to gain instant feedback by silencing noisy avatars. It is crucial to note, however, that expert evaluation from speech scientists remains indispensable as the system does not assess vocal quality.

The software solution has garnered positive acclaim for its robust performance, stability, and immersive experience, as evidenced by numerous

commendations received from seminar participants (see Nespital/Czerney article from the NORDSCI 2023 Conference).

Looking ahead, a promising avenue for further development would be to implement an algorithm capable of evaluating whether the voice is being used in a manner that minimizes strain, thereby adding another layer of sophistication to the training environment.

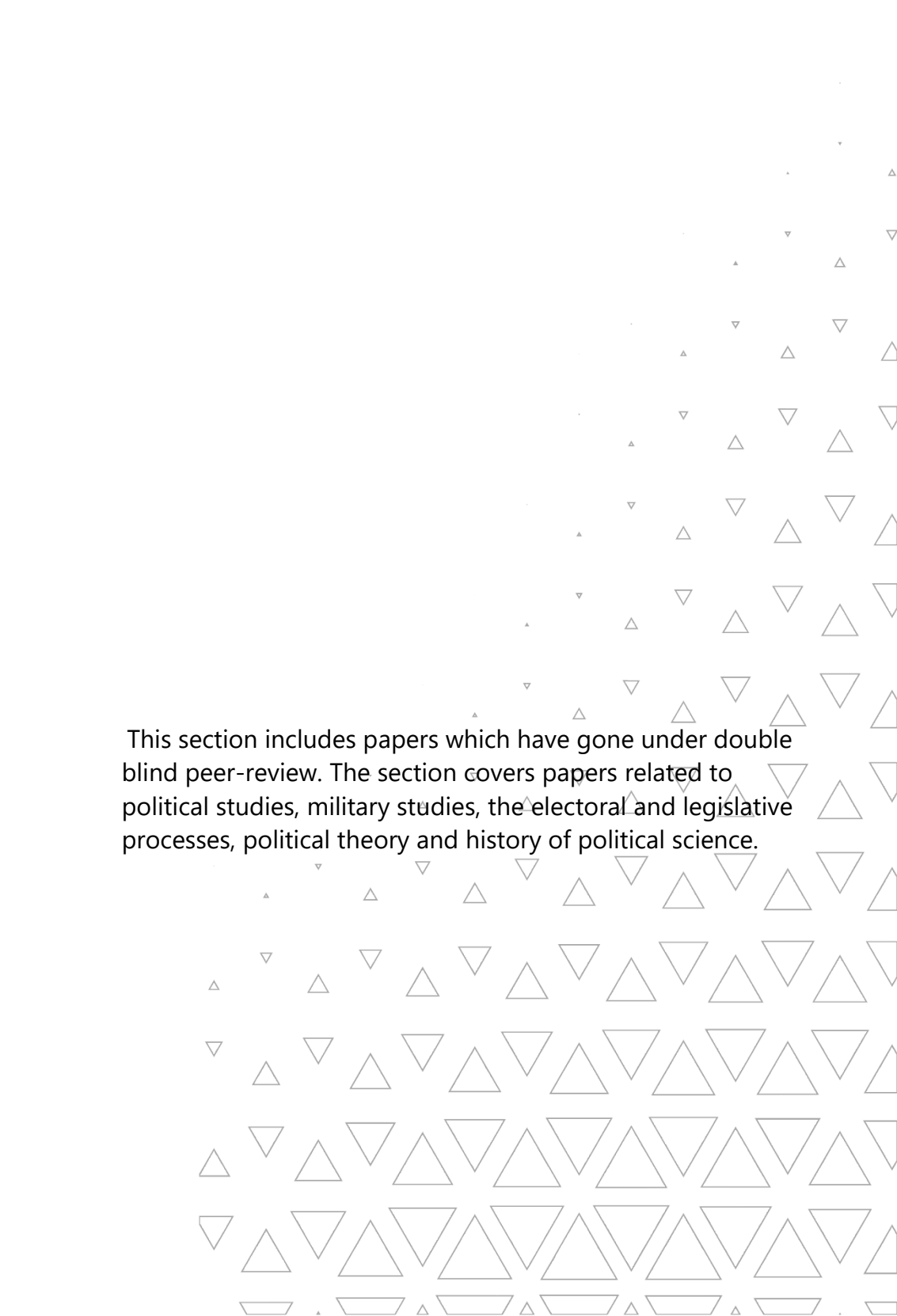
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**Section**

POLITICAL SCIENCE



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This section includes papers which have gone under double blind peer-review. The section covers papers related to political studies, military studies, the electoral and legislative processes, political theory and history of political science.

# **CITIZENS' TRUST IN INSTITUTIONS AND EXPERTS' ATTITUDES REGARDING MUNICIPAL WASTE MANAGEMENT**

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## **ABSTRACT**

This article discusses the problems of municipal waste disposal, i.e. its disposal sites in the community, which is experiencing a constant growth in the tourist offer while attempts are being made to solve the problem of rehabilitation of the existing municipal waste disposal site, and to build a new county center for waste management, including an incinerator. The aim of the research is to examine the views of the citizens of the city of Split, the urban center of Split-Dalmatia County, about the presence of the NIMBY (Not In My Backyard) syndrome, i.e. their fear and distrust towards solving the problem of municipal waste disposal and choosing a location for a new landfill. The focus will be on the attitudes related to trust in waste management institutions. This belongs to the part of quantitative research, carried out with a survey questionnaire, on a sample of citizens of the city of Split (N=450) through on-line biased sampling. Furthermore, using the qualitative method, i.e. the *purposeful sampling* technique, interviews were conducted with representatives of city management, experts, the media and civil society organizations who deal with this issue. In this context, the focus is on their experiences and efforts in the creation, implementation and presentation of public policies to solve this problem. The results of the quantitative research show average trust of citizens in certain management structures of local and national authorities, and other professional and civil stakeholders, and a somewhat lower level of trust in public utility services and the media. They show the least confidence in the state bodies of the Republic of Croatia. The research results highlight, among other things, a lower degree of trust in the media than expected, given that for citizens the media is the main source of information when it comes to environmental problems in the area of the city of Split. It is generally concluded that the media, civil society organizations and political/management structures do not influence the perception of citizens and the creation of an image of current environmental problems in Split. In this sense, challenges arise regarding public communication of this problem, as well as citizens' ecological literacy, that is, basic knowledge about waste management cycles and the nature of municipal waste, and more active citizen participation in these cycles. Therefore, there is a need to develop training programs, such as

citizen science for waste management, to gain knowledge about this problem while developing greater public participation.

**Keywords:** *citizen science, fear, NIMBY syndrome, municipal waste, trust, waste management*

## INTRODUCTION

Although the waste issue is seen as a scandal, a disintegrating factor of the human and world community, on the other hand it is claimed that waste is nevertheless a "symbol" of our way of dealing with the environment [1] the most banal example of environmental risks in our everyday life [2], and the perfect metaphor of the regulatory processes in the management of services [3]. Thus, for example, research on the environmental concerns of Croatian citizens at the beginning of the 21st century [4] recorded a high ranking of the problem of inappropriate municipal waste disposal. In those years, the problem of unsustainable waste management was given priority at the national level, thus including the issue in the priority areas/topics, with an emphasis on waste prevention. The latter particularly relied on the established "waste hierarchy" approach in the countries of the European Union, which includes the avoidance of waste generation and the promotion of its processing, recycling and composting, and reuse [5]. In addition to the aforementioned strategy, a number of national level plans and strategies concerning waste management have been prepared and adopted to date, and in 2015 a complete waste management system was established in the Republic of Croatia, in accordance with the obligation of the member states of the European Union. In addition, one of the last significant obligations or recommendations of the European Commission refers to the promotion related to circular economy which aims at maintaining value of products and materials as long as possible [6].

Parallely, during the last about 20 years, research on this issue in Croatia has been continuously published in scientific and professional periodicals ([4], [7], [8], [9], [10], [11]) but discussions about waste collection and disposal have only in recent years taken up more and more space in everyday discourse and media. In this sense, there are discussions on the effectiveness of public communication regarding the problem, that is, the somewhat belated realization that "public communication plays a vital role in providing infrastructure for waste management" [12]. Since the problem is quite present in the public space, a challenge arises to research the quality and effectiveness of its public communication, especially regarding citizens' perception of the problem, on the one hand, and the views of and experts or decision makers on the methods and system of its management, on the other hand. This context was taken as the topic of research in the area of the Split-Dalmatia County and the city of Split. According to the latest Municipal Waste Report for 2021, a total of 188,868.85 tons of municipal waste was collected in this Croatian county [13]. In connection with the mentioned data, i.e. the comparison with previous years does not show

the trend of waste reduction, which is partly attributed to the significant increase in the number of tourist overnight stays, i.e. the sudden increase in the tourism industry.

This research is dedicated to the topic of municipal waste disposal, i.e. the problem of landfills in the community, which is experiencing constant growth in tourism, in the current period when attempts are being made to solve the problem of rehabilitation of the existing municipal waste disposal site and to build a new county center for waste management, including an incinerator. In this sense, special attention will be paid to possible attitudes related to the NIMBY (Not in My Back Yard) syndrome, typical for the emergence of social resistance to the construction of a new public utility facility for the area of waste management. Although, due to the increased problems in waste management, it is assumed that individuals in society are aware of the inevitability of certain investments to solve this problem, at the same time, there is a misunderstanding regarding the processes and investments undertaken, especially in relation to the choice of location for new facilities. The thesis about citizen dissatisfaction and partial ineffectiveness of management structures was confirmed in the research, whereby we highlight the results of quantitative and qualitative research with an emphasis on the inconsistency of public communication regarding this problem.

## **OBJECTIVES AND METHODOLOGY**

In accordance with the topic, the main goal of our research refers to the investigation of the attitudes of the citizens of Split, the urban center of the Split-Dalmatia County, about the presence of NIMBY attitudes towards the problem of municipal waste disposal and the selection of a location for a new landfill. The focus is on the statements in relation to their trust in waste management institutions. This belongs to the part of the quantitative research, conducted with a survey questionnaire on a sample of citizens of the city of Split (N=450) through on-line biased sampling. Using a qualitative method, i.e. the purposeful sampling technique, interviews were conducted with representatives of city management, experts, the media and civil society organizations who deal with this issue. In this context, the focus is on their experiences and efforts in the creation, implementation and presentation of public policies to solve this problem.

The methodological approach includes both quantitative and qualitative methods. The survey method was used to obtain the data on the presence of NIMBY attitudes among the citizens of Split and its surroundings regarding the existing and planned area for municipal waste disposal. The survey was conducted by administering an online questionnaire to all citizens as potential respondents [14]. The decision to conduct this type of survey research was due to epidemiological measures in connection with the COVID-19 pandemic (2021) and the impossibility of the usual in-person meeting with respondents. A sample of N=450 respondents was obtained. In the second part, qualitative research was conducted by applying the purposeful sampling technique, which is widely used

in qualitative research to identify and select cases with rich information for the most efficient use of limited resources [15]. This technique is especially used in research synthesis of quantitative and qualitative research [16], such as this one. It is a mixed model that combines these two approaches in all phases of the research process, not only in methodology but also in data analysis [17]. Purposeful sampling implied the selection of individuals who are particularly familiar or have experience with the analyzed issue [18]. In our case, sampling included choosing four respondents, i.e. representatives of city management, experts, the media and civil society organizations. The interview method was applied to gain insight into the work and activities, attitudes and values of the aforementioned stakeholders regarding the construction of a more efficient municipal waste management system in the city of Split and its surroundings, including the construction of a new waste disposal site, especially considering that quantitative research shows the announced construction of this landfill is one of the main drivers of citizens' dissatisfaction. We conducted the research in the period of June and July 2022, as part of the research work at the Department of Sociology of the Faculty of Humanities and Social Sciences in Split, with title "Risk perception and the presence of NIMBY attitudes of citizens of the city of Split in relation to the problem of the city's landfill". The obtained data from the quantitative research were processed with the statistical program for social research (SPSS), giving the results in the continuation of the work as well as the manuscripts of the conducted interviews for qualitative part of research, with our comments through discussion.

## RESULTS AND DISCUSSION

In connection with the possible characteristics of NIMBY attitudes present among citizens, we investigated the presence of fear and mistrust, as determinants associated with the emergence of this syndrome, by offering citizens multiple choice questions (*Table 1*).

The largest percentage of citizens who participated in the survey often feel distrust in the government and experts (48.2%), while 28.2% feel the same sometimes, and 23.6% never. Almost half of the participants feel mistrust in institutions often (49.1%), while 29.1% feel it sometimes, and 21.8% never. Moreover, when it comes to mistrust in waste management technology, there is the highest percentage of those who feel the same way often (48%), while 26.4% of participants never feel mistrust in waste management technology, and 25.6% of them feel it sometimes.

**Table 1.** *Presence of citizen fear and mistrust*

| Have you ever felt the following:                        | <i>often</i> |          | <i>sometime</i> |          | <i>never</i> |          | <i>total</i> |          |
|--|--------------|----------|-----------------|----------|--------------|----------|--------------|----------|
|  | <i>f</i>     | <i>%</i> | <i>f</i>        | <i>%</i> | <i>f</i>     | <i>%</i> | <i>f</i>     | <i>%</i> |
| injustice  | 200          | 44.4     | 160             | 35.6     | 90           | 20.0     | 450          | 100.0    |
| fear for your own health and health of your loved ones   | 152          | 33.8     | 186             | 41.3     | 112          | 24.9     | 450          | 100.0    |
| fear of devastation                                      | 153          | 38.4     | 170             | 37.8     | 127          | 28.2     | 450          | 100.0    |
| some kind of threat (environmental, economic, financial) | 173          | 38.4     | 147             | 32.7     | 130          | 28.9     | 450          | 100.0    |
| mistrust in the government and experts                   | 217          | 48.2     | 127             | 28.2     | 106          | 23.6     | 450          | 100.0    |
| mistrust in institutions                                 | 221          | 49.1     | 131             | 29.1     | 98           | 21.8     | 450          | 100.0    |
| mistrust in waste management technology                  | 216          | 48.0     | 115             | 25.6     | 119          | 26.4     | 450          | 100.0    |

As for the degree of trust of the research participants in certain political structures and other professional and civil stakeholders, citizens have moderate trust in experts in the field of ecology and the environment as well as in environmental associations. With a slightly lower degree of trust, they are followed by public utility services, the mayor's office and the media. On the other hand, the participants have the least confidence in the state bodies of the Republic of Croatia, which is also evident from the obtained results of the data related to the median of the distribution (M) (Table 2).

**Table 2.** *Trust in institutions and the public*

| Mark the degree of trust in the following actors:     | <i>1</i> |          | <i>2</i> |          | <i>3</i> |          | <i>4</i> |          | <i>5</i> |          | <i>Total</i> |          |
|---|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|--------------|----------|
|   | <i>f</i> | <i>%</i> | <i>f</i> | <i>%</i> | <i>f</i> | <i>%</i> | <i>f</i> | <i>%</i> | <i>f</i> | <i>%</i> | <i>f</i>     | <i>M</i> |
| mayor's office  | 128      | 28.4     | 125      | 27.8     | 118      | 26.2     | 50       | 11.1     | 29       | 6.4      | 450          | 2.39     |
| public utility services                               | 103      | 22.9     | 147      | 32.7     | 130      | 28.9     | 49       | 10.9     | 21       | 4.7      | 450          | 2.42     |
| experts in the field of ecology and environment       | 84       | 18.7     | 122      | 27.1     | 115      | 25.6     | 101      | 22.4     | 28       | 6.2      | 450          | 2.70     |
| NGOs dealing with ecological and environmental issues | 103      | 22.9     | 113      | 25.1     | 104      | 23.1     | 92       | 20.4     | 38       | 8.4      | 450          | 2.66     |
| state bodies of the Republic of Croatia               | 136      | 30.2     | 166      | 36.9     | 99       | 22.0     | 28       | 6.2      | 21       | 4.7      | 450          | 2.18     |
| media   | 120      | 26.7     | 149      | 33.1     | 128      | 28.4     | 31       | 6.9      | 22       | 4.9      | 450          | 2.30     |

It is an interesting fact that the citizens who participated in the research have a lower degree of trust in the media than expected, given that for them the media is the main source of information when it comes to environmental problems in the city of Split (*Table 3*). In connection with the latter results, challenges appear regarding the media communication of this problem as well as citizens' awareness and basic knowledge about the nature of municipal waste and waste management cycles and more active citizen participation. In this sense, there is a need to develop a *citizen science for waste management* training program [24] as a tool for developing participation of citizens.

**Table 3.** *What is your main source of information about environmental problems in the area of the city of Split*

| State your main source of information about environmental problems: | <i>f</i> | <i>%</i> |
|---|----------|----------|
| social network  | 150      | 33.3     |
| media (portals, daily press, television, radio)                     | 188      | 41.8     |
| friends and acquaintances   | 98       | 21.8     |
| professional articles and books                                     | 14       | 3.1      |
| Total   | 450      | 100.0    |

Regarding the attitudes of the interlocutors(I) expressed in the interviews with representatives of management structures, the media, public utility companies, and civil society (four interlocutors as representatives of each sector) related to public communication of the waste issue, it can be concluded that no one dealt with this topic at a satisfactory level. The following statements stand out in this context:

*- I think that waste is used a lot in the media space as a topic because it is a very interesting topic for the wider community. However, all this occurs in a superficial way. There are mostly platitudes, a few superficial sentences about the topic, but few decision-makers, future/former mayors, chiefs, ministers have delved deeper into the topic to know something more, and more relevant about it... The media also take a superficial interest in the topic. (I2)*

*- There are all kinds of politicians, ... some worry more, some wait for something to happen by itself and do nothing, they wait for time to pass, and for another government to take care of it... The media also, we can say, do not deal with this topic more seriously, for example now, in this last phase of rehabilitation of the existing waste disposal site. (I4)*

Furthermore, the interlocutors were asked about participation in public debates and/or some of the civic initiatives or environmental protests. It can be concluded that the interlocutors participate in them as much as their private obligations and expected behaviors related to the nature of their work allow, but with an emphasis on structured panel discussions, while participating in environmental protests and/or similar initiatives is still expressed to a lesser extent. They say the following:

*- Yes, I participate in the adoption of certain acts and when there are some changes within the mentioned structure. (I2)*

*- Let's say I did, but those are not very important discussions, more like workshops where information was collected and the like. (I4)*

*- I participated in a conference on environmental protection where experts from various parts of Europe were invited, and they spoke about composting, biowaste disposal and similar environmental topics. (I3)*

*- As for protests, we are not active in that part because we like to solve some things spontaneously. (I1)*

*- We joined an environmental protest, normally we do not do that, but we are happy to respond to invitations if they are constructive. (I2)*

We were also interested in the views of the interlocutors when it comes to the media and assessing their impact on citizens' perception of the waste problem in the city of Split. It can be said that the media report on the issue, but the question is how much of this information has credible sources. When adding rhetoric used to attract the readership of certain articles and portals, the interlocutors agreed that they should be more careful in their approach, i.e. that:

*- The media always blow up any topics for various reasons, mostly because of the readership or viewership, considering that, among other things, it brings them profit. (I3)*

*- Well, how do the media report on the real situation... In fact, we need to filter which media portray the real situation as objectively as possible, but I think that in the end they are not, that they do not report in such a way. Sometimes when they exert pressure, this does not necessarily mean that it is a real problem, for example. (I1)*

*- Well, I can't say that they don't convey what is interpreted to them and thus present it to the public. I can't even say that they are uninterested. It's just a matter of superficiality. (I2)*



Considering the connection between civil society organizations and citizens and local communities, we were interested in the extent to which civil society influences citizens' perception of waste management problems. Although, as can be said, they are quite connected, it was determined that their influence is not sufficient or at least not as sufficient as the citizens and civil society organizations would like. In this context, it was said that:

*- They have a positive effect, but to a small extent. In everyday discourse, it seems as if they are not known about. You can see some progress, considering how it was, but there is still a lot of space. (I 3)*

*- I think that civil society has an insufficient influence on citizens' perception of the waste problem. Many citizens are not at all aware of the role of civil society, not only in environmental protection but in general and in other topics, and the role of the civil sector as a professional and important stakeholder and participant in various topics from social life is often underestimated. This is partly the fault of civil society. (I 2)*

*- So, I personally would trust civil associations a lot more, but serious civil associations that warn about the problem, and for me, they would have more credibility than the media. (I 4)*

The reasons for the above are still to be examined, along with the factors that need to be changed and/or improved in order to achieve positive results.

After looking at the media and civil society and their work and efforts regarding the perception of waste management problems in the city of Split and its surroundings, it is essential to look at the political structures, that is, the stakeholders who make decisions and their influence on the above-mentioned. When it comes to the last group, the interlocutors believe that they are aware of how much a reference to an environmental topic, or for example the ever-present problem with the current municipal landfill, can bring them political points, and that they use it skillfully. However, the problem arises when these conversations are not what the citizens might have expected, and also later when they start and/or don't start with concrete implementation. They describe their opinions and experiences as follows:

*- I think that politicians are more and more aware that environmental behavior is one of the most important things for their politics. I think that they are increasingly aware that it is important to incorporate this issue into their plan and program and that this issue must be their top priority. But the problem with politics is that it does not think long-term. (II)*

*- I know from experience that in any actions and processes that were oriented against something, where there were two sides, that the winners were always*

*those who, along with their actions, received support in the form of political pressure. (I2)*

*- So, they represent something that the citizens would like to hear, and if they can be trusted, you can only hope that they care and that they will deal with it, but whether you can trust them... now it depends from person to person whom they show trust. (I4)*

The attitudes of the interlocutors, as can be seen in the previous interpretation of the research results, are conditioned by their position as decision-makers, which directs them towards efforts to inform and cooperate with the public in a way that convinces them of the correctness of the current measures in solving the problem of waste management. At the same time, as shown by the results of quantitative analysis about the measures that have been undertaken to solve this problem, the problems of communication and knowledge about the issue stand out, which has produced a number of indicators of the existence of mistrust between citizens and stakeholders participating in these processes. A strong feature of this mistrust relates to the recognized lack of information and knowledge about the problem.

## CONCLUSION

The topic and results of this research show that to solve this important public problem, it is extremely important to engage, motivate and empower members of the public to better understand the complexity of the problem and their role in solving it [19]. A better understanding of the problem, i.e. the inclusion of citizens as the largest part of the public, implies that institutions responsible for waste management, strategic planning, inclusiveness, transparency, continuity, and resources should receive support for achieving goals [20]. It is precisely these challenges that are connected with the research results, which necessarily leads to a perspective that seeks to inform and educate citizens and the public. In this sense, we can also talk about the need to use the recognized advantages of citizen science in the study of waste characterization, for which initiatives and practices are emerging in the world [21]. Harmonized communication about the environment leads to successful activities and engagements built on the value foundations of stakeholders and the local context, which especially refers to the potential of local stakeholders, such as the environmental activities of non-governmental organizations that are focused on children [22]. In other words, in addition to significant strategies, action plans, clear awareness and concern for the problem and process of municipal waste management in the local community, and the openness of public stakeholders for cooperation, public communication about the problem remains to be improved. This certainly requires knowledge and information about the nature of and potential for municipal waste management, which, according to the results of this research, is required by the general public and mostly refers to greater citizen participation.

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# PRO-RUSSIAN PROPAGANDA ON SOCIAL MEDIA DURING THE PRE-ELECTION CAMPAIGN IN SLOVAKIA

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## ABSTRACT

Citizens of the Slovak Republic are exceptionally prone to believing disinformation according to public opinion surveys, and authoritarian leaders enjoy high support among the population. In recent years, security forces have pointed out the direct influence of the Russian Embassy in Slovakia, which has been trying to influence public opinion by means of direct financial support to disinformation media. Additionally, the police are also investigating connections between the Russian Federation and political parties with high popularity. In this study, we analyze the most followed profiles of candidates on the social network *Facebook* in parliamentary elections. Precisely, *Facebook* has undoubtedly contributed to the polarization of society in liberal democracies, the spread of biased content, and the blurring of the boundaries between truth and lies. The goal of the study is to analyze the content of posts with the highest number of interactions and to define the narratives that influence public opinion before the elections.

**Keywords:** elections, influence, politics, propaganda, social media

## INTRODUCTION

In addition to billboards, rallies and print advertising, political parties spend a substantial part of their expenditure on sponsoring social media posts prior to elections. The trend can also be confirmed by the transparent accounts that candidate parties were required to set up to record their spending before the early parliamentary elections. On the parties' accounts as well as on the website [www.transparentneucty.sk](http://www.transparentneucty.sk), which disclose every real transaction and do not circumvent the unhappily written law, we can see payments to *Facebook* (*Meta*) in the region of hundreds of euros as often as twice a day. Candidates and parties running for office can target one-sided content on social networks with extreme precision, with which they influence public opinion. The study maps the communication of political candidates ahead of the parliamentary elections to be held in Slovakia on 30 September 2023. We analyse posts on the social network *Facebook*, which has undoubtedly contributed to the polarisation and fragmentation of opinion in society.

## THE IDEAL POLITICIAN IN SLOVAKIA?

### A DEMOCRATIC AUTOCRAT, SAVIOUR, AND GUARDIAN OF THE NATION

Even more than 30 years after the fall of the totalitarian regime, the Slovak Republic still enjoys the popularity of strong leaders who seem to have everything under control and who are always ready to save the nation. The slogans "*Only a strong state will help the people*" (the *Smer-SD* party), "*We will make order*" (the *Republika* movement), or "*Stability, order and social security*" (the *Smer-SD* party) also appear in the 2023 election campaign... According to the research of G. Hoftseide and G. J. Hofstede, who analysed the situation in fifty countries, Slovakia is among the countries with the absolute greatest tendency to trust masculine alpha males to be combative, competitive and tenacious. [1] According to the psychological profile, Russian President Vladimir Putin also meets these characteristics. On the basis of indirect personality assessment, A. Immelman and J. V. Trenzeluk identified that the primary personality traits of the Russian president are dominance characterized by a degree of aggression and hostility towards others, ambition, by which he easily assumes leadership roles, and conscientiousness, which is supposed to be manifested by a strong work ethic and a declared attention to detail. [2] Moreover, there is a long-standing and growing number of people in Slovakia who would prefer to be ruled by a strong autocratic leader who does not have to bother with a parliament or elections. In a 2022 Globsec poll, as many as 49% of respondents tended to favour an autocratic form of government. Along with Bulgaria, Slovakia is also one of the countries where people are most likely to believe in conspiracy theories. For a long time, the most popular conspiracy theory is the one that expresses doubts about the existence of democracy itself and the belief in the rule of secret elites that govern the world. [3] Today there is no doubt that part of the disinformation campaigns on the territory of the Slovak Republic is and has been supported directly by the Russian Federation. In early 2022, the Slovak Police documented meetings of employees and direct financial payments of the Russian Embassy in Slovakia with representatives of the disinformation scene, the Ministry of Defence and the secret service. [4] B. Nimmo, an expert on disinformation and influence operations, described to the Central European Policy Institute that the Russian propaganda machine uses a sophisticated network of officials, pseudo-journalists and internet trolls, but its messages are extremely simple - trying to advance the narrative that the USA is trying to take over the world and only Russia is brave and strong enough to stop them. [5] Disinformation and propaganda is dealt with by a separate department of the Slovak Police, which identified in its 2022 report that the creators of pro-Kremlin propaganda have set several main goals in relation to the Slovak Republic, including gaining support for the Russian Federation at the expense of support for Ukraine; questioning state authorities and international communities; causing information chaos in the information space; and questioning the democratic establishment in Slovakia. [6] According to I. Smoleňová, the pro-Russian disinformation campaigns in Slovakia and the Czech

Republic are characterised in particular by extensive activity on social networks and the organisation of public events and rallies at which the same arguments are used to create a positive image of the Russian Federation. [7] Pro-Kremlin propaganda has long focused on the dissemination of basic theses. V. Ogrysko speaks about basic ideological clichés for the audience, among which he ranks, for example: that Russian ethnic minorities are suppressed in Ukraine and the EU; the US and the EU have organized colour revolutions in several post-Soviet countries against Russia; Russia is a fortress in the fight against modern fascism; the Russian Orthodox Church is the only correct religion; Europe is becoming Gay Europe; the Russian world is an alternative to Gay Europe and others. [8] We observe similar narratives in the communication of political leaders in Slovakia.

## GOALS AND METHODS

The study is pilot research on the pre-election communication of politicians on *Facebook*. We have previously pointed out that Russia's invasion of Ukraine and the West's aid to Ukraine have changed the communication strategy of parts of the political spectrum in Slovakia. The narrative of "Slovakia and Slovaks first" has come to the fore. Through content analysis, we will find out whether the contributions of the candidates with the most interactions contain elements of Russian propaganda.

24 political parties and movements and one electoral coalition are standing in the parliamentary elections. The State Commission for Elections and Control of Political Party Financing has registered 2,722 candidates on the lists of candidates. For the sake of comprehensiveness and the available opportunities for researchers, we have selected the candidate lists of political entities of at least minimal potential to reach voters for the research set. We have calculated the arithmetic mean of voter preferences based on the Focus, AKO and Ipsos election models conducted in August 2023 and have included political entities that achieved at least one percent in the research set. The Focus, AKO and Ipsos agencies are well established on the Slovak market and have been working on electoral models for a long time and on a regular basis. The sample consists of thirteen candidate lists.

**Table 1.** *Preferences of political parties by agencies*

| <b>List of Candidates</b>                        | <b>Abbreviation</b> | <b>Ipsos</b> | <b>Focus</b> | <b>AKO</b> | <b>Average</b> |
|--|---------------------|--------------|--------------|------------|----------------|
| <i>SMER – sociálna demokracia</i>                | <i>Smer</i>         | 19,7         | 20           | 19,9       | 19,86666667    |
| <i>Progresívne Slovensko</i>                     | <i>PS</i>           | 16,9         | 15           | 16,4       | 16,1           |
| <i>HLAS – sociálna demokracia</i>                | <i>Hlas</i>         | 13,3         | 14,2         | 15,2       | 14,23333333    |
| <i>Republika</i>                                 | <i>Republika</i>    | 7,9          | 8,8          | 6,7        | 7,8            |
| <i>OLaNO a priatelia...</i>                      | <i>OLaNO</i>        | 7,7          | 6,4          | 6,7        | 6,933333333    |
| <i>Sloboda a Solidarita</i>                      | <i>SaS</i>          | 5,7          | 6,1          | 6,6        | 6,133333333    |
| <i>Kresťanskodemokratické hnutie</i>             | <i>KDH</i>          | 6,2          | 6,1          | 6          | 6,1            |
| <i>Sme rodina</i>                                | <i>Sme rodina</i>   | 5,5          | 5,1          | 6,1        | 5,566666667    |
| <i>Slovenská národná strana</i>                  | <i>SNS</i>          | 5,1          | 5,3          | 5,8        | 5,4            |
| <i>SZÖVETSÉG / Aliancia</i>                      | <i>Aliancia</i>     | 3,6          | 3,4          | 2,2        | 3,066666667    |
| <i>Demokrati</i>                                 | <i>Demokrati</i>    | 2,9          | 3,1          | 2,2        | 2,733333333    |
| <i>Kotlebovci – Ľudová strana Naše Slovensko</i> | <i>LSNS</i>         | 2,9          | 2,1          | 1,2        | 2,066666667    |
| <i>Modrí, Most - Híd</i>                         | <i>Modrí</i>        | 1,4          | 1,8          | 1,5        | 1,566666667    |

Source, own processing, 2023.

In the pilot study, we are narrowing the sample to candidates who have the greatest potential to win a seat in the National Assembly. We have measured the popularity of the first ten and the last four candidates on the candidate lists on *Facebook* based on the number of followers. A specific feature of some of the candidates running in the Slovak parliamentary elections is the placement of prominent candidates, e.g. in the case of the *OLaNO* leader, in last place on the candidate lists. They can win a mandate on the basis of four preference rings, which are awarded by the voters on the candidate lists.

To measure the popularity of candidates on *Facebook*, we used CrowdTangle, an analytics tool that collects data from all public fan pages, public groups, and verified profiles. It does not include data from non-public groups and users' private posts. We tabulated the number of followers of fan pages and public profiles as of 12 August 2023 when, at the time of writing the study, the last available indexing of all tracked profiles in the CrowdTangle system took place. The final research population for this pilot study consists of candidates who have more than 100.000 followers on *Facebook*.



**Table 2.** *List of candidates and number of followers on Facebook*

| <b>Candidate</b> | <b>Party of Candidate</b> | <b>Position on list</b> | <b>Public page name</b>            | <b>Followers</b> |
|------------------|---------------------------|-------------------------|------------------------------------|------------------|
| Peter Pellegrini | <i>Hlas</i>               | 1                       | Peter Pellegrini                   | 315.918          |
| Igor Matovič     | <i>OLaNO</i>              | 150                     | Igor Matovič                       | 272.187          |
| Robert Fico      | <i>Smer</i>               | 1                       | Robert Fico                        | 220.745          |
| Milan Mazurek    | <i>Republika</i>          | 150                     | Milan Mazurek - Republika          | 195.348          |
| Milan Uhrík      | <i>Republika</i>          | 1                       | Milan Uhrík - Republika            | 168.359          |
| Richard Sulík    | <i>SaS</i>                | 1                       | Richard Sulík                      | 141.468          |
| Boris Kollár     | <i>Sme rodina</i>         | 1                       | Boris Kollár                       | 137.631          |
| Andrej Danko     | <i>SNS</i>                | 1                       | Andrej Danko - the chairman of SNS | 109.617          |

*Source: own processing, 2023.*

Based on data from the CrowdTangle tool, we analyze the contributions of the tracked candidates with the most interactions in the month of August 2023.

## **ANALYSIS OF POSTS WITH THE MOST INTERACTIONS ONE MONTH BEFORE THE GENERAL ELECTION**

### *Public page of Peter Pellegrini*

The chairman of the *Hlas* party, Peter Pellegrini, achieved the highest number of interactions with a pre-recorded video interview from 17 August 2023 during the period under review. He was commenting on the internal political scandal in the security forces surrounding the Secret Service and the National Security Office. The former Prime Minister questioned the investigation and detention of top officials from the security forces 6 weeks before the elections. In a speech that is 2 minutes and 11 seconds long, he says that he believes there is a secret group in the leadership of the police and the prosecutor's office that may have acted at the instigation of political opponents. Without evidence, he speaks of a conspiracy in the Ministry of the Interior and in the law enforcement agencies. Pellegrini's message in his publication is that he rejects police influence in the elections. He concludes by mentioning the socio-economic situation of the population, the high prices of food and energy, the state of the health system and the persistence of regional disparities. He addresses the audience with standard messages about the need to create a "strong state" that will address domestic problems. The post received 4.169 reactions, 903 comments and 488 shares. The

video itself has been viewed by 121.403 users. It was sponsored and the *Hlas* party is duly listed as the sponsor of the political advertisement.

### Verified personal profile of *Igor Matovič*

The chair of the *OLaNO* movement is the only monitored candidate who does not communicate on *Facebook* via a public page, but through a personal verified profile. For unknown reasons, the CrowdTangle tool does not allow us to analyse activity on his profile and the indexing of his profile ended in February 2023. During the period under review, we analyse the activity on his *Facebook* feed manually. During the month of August 2023, we do not see elements of Russian propaganda. In several posts he spoke out against the *Republika* movement and condemned the occupation of Czechoslovakia in 1968. He published posts from pre-election rallies and shared contributions by other candidates for the electoral coalition *OLaNO a priatelia...*

### Public page of *Robert Fico*

Robert Fico, the chairman of the *Smer* party, achieved the highest number of interactions in the period under review following his speech, which he delivered during his party's alternative celebrations on the anniversary of the Slovak National Uprising in Zvolen on 29 August 2023. He posted a video on *Facebook* that lasts 14 minutes and 25 seconds. The *Smer* election leader criticises the organisation of the official celebrations in Banská Bystrica, where he says top constitutional officials were afraid to meet citizens. The *Smer* leader criticises the actions of Ukraine, which, in his view, oppresses Russians on its territory. He thanked the Soviet Union for the liberation of Czechoslovakia and praised the totalitarian leader of the Communist Party of Czechoslovakia and former President Gustav Husák, who, in his opinion, was the most important person in modern Slovak history. Fico argues that the official commemoration of the uprising saw the acceptance of the symptoms of modern Nazism, as evidenced by the support of the Azov Club or Bandera in Ukraine, which Fico says is being defended by fascists. He announces that if he gets enough electoral support, a Slovak sovereign government will be formed after the elections, which will be composed of Slovak sovereign politicians and not representatives of NGOs or the media. He announced a fight against anti-Russian economic sanctions. Misinformation that the economy of the Russian Federation is growing thanks to them is spread, while the EU is slipping into recession. *Smer* party representatives regularly spread Russian propaganda and have long claimed that support for Ukraine is prolonging the war. On the one hand, they reject the war, but at the same time they always understand the Russian Federation's concerns and adopt the narrative of pro-Kremlin propaganda. The post has received 26.444 reactions, 3.784 comments and 4.007 shares. It has been seen by 271.627 users.

Public page of *Milan Mazurek - Republika*

Milan Mazurek, vice-president of the *Republika* movement, achieved the highest number of interactions on his *Facebook* page under a pre-recorded video speech from 8 August 2023. In the description of the speech, he states that the European Union protects paedophiles and at the same time has initiated legal proceedings against Hungary, whose democratically elected parliament has passed a law to protect young people from paedophiles. Mazurek claims that the EU has launched an open war against its own member states that have decided to oppose the radical extremist rainbow agenda. The video ends with a pre-election promise "in the *Republika* movement we are clear about our values, if you put your trust in us, you don't have to worry about your children being exposed to perverse agendas. We are not afraid to stand up to Brussels." Milan Mazurek was legally convicted of a racial defamation offence in 2019. The *Republika* movement has long been among the most prominent purveyors of disinformation about the European Union, sees strategic alliances with the Russian Federation, and regularly adopts a pro-Kremlin narrative about the emergence of a Gay Europe. The post with the most interactions in the period under review received 6.869 reactions, 369 comments and 1.390 shares. The video has been viewed by 81.772 users. It was sponsored and the *Republika* movement is duly listed as a political advertiser.

Public page of *Milan Uhrík - Republika*

Milan Uhrík, the chair of the *Republika* movement, received the largest number of interactions in the period under review for a short status update from 30 August 2023, in which he reacted to the announcement of the presidential candidacy of ex-Foreign Minister Ivan Korčok. "Korčok for president? Slovakia doesn't need another Čaputová in trousers 🇸🇰 It needs a man who will boldly stand up for Slovakia. The opposite of Korčok 😊" There were 12.312 reactions, 2.015 comments and 3.117 shares. For context, it should be noted that the leaders of the *Republika* movement refer to President Zuzana Čaputová as a "progressive puppet" of the European Union and the US who is dragging the country into war. They accuse Ivan Korchok of pushing for a defence deal with the US, criticise him for supporting sanctions after the Russian invasion of Ukraine and military support for Ukraine.

Public page of *Richard Sulík*

Richard Sulík, the chairman of the *SaS* party, records the highest number of interactions in the monitored period on the post from 31 August 2023 from the TV debate summary with a length of 1 minute 24 seconds. In it, he presents the party's economic election programme and criticises populist handouts. He calls for the promotion of right-wing reforms, the reintroduction of a flat 19% tax and higher flat rate spending for sole traders. The post registered 3.284 reactions,

2.200 comments and 164 shares. The video has been viewed by 113.900 users. It was sponsored and the *SaS* party is duly listed as a political advertiser.

#### Public page of *Boris Kollár*

Boris Kollár, the chairman of the National Council of the Slovak Republic and the *Sme rodina* movement, received the highest number of interactions in the period under review under a post from 14 August 2023. In the video post, which lasts 1 minute and 19 seconds, he shows a celebration of his birthday with a number of children. Boris Kollar is known to have 13 children with 11 wives. In the description of the video, he thanks everyone who remembered his birthday and especially his beloved children who prepared a surprise for him. The post received 6.506 reactions, 1.257 comments and 147 shares. It has been seen by 590.434 users.

#### Public page of *Andrej Danko*

Andrej Danko, the chairman of *Slovenská národná strana (SNS)*, has the highest number of interactions in the monitored period under a photo from 7 August 2023 with the caption "I had a beer in London with this guy. Do you know him? Danny Kollar. I'll tell you more tomorrow. Have a nice evening. Andrej." The post received 4.493 interactions, 439 comments and 148 shares. Danny Kollar, real name Daniel Bombic, is a prosecuted star of the Slovak disinformation scene. He has a European arrest warrant out for him and must wear an electronic monitoring bracelet in London, where he has lived for a long time. He is under investigation in Slovakia for extremism and cyberbullying. Bombic has already been blocked by *Facebook* and continues to operate on the *Telegram* platform. After the Russian invasion of Ukraine, he clearly sided with the Putin regime, describing Ukrainian President Volodymyr Zelensky as a Jewish homosexual and a rat installed by a Nazi regime.

## CONCLUSION

The pilot study analysed the posts that had the potential to reach the largest number of users on *Facebook* one month before the early parliamentary elections in Slovakia. Elements of pro-Kremlin propaganda were registered in four of the monitored posts. In the posts with the largest number of interactions, the concealed sympathies of candidates Milan Uhrík (*Republika*) and Andrej Danko (*SNS*), who do not directly declare support for the Russian Federation, are interesting. However, after knowing the context and the histories of the candidates under consideration, the attitudes are unambiguous for the audience. In the contribution of Robert Fico (*Smer*) we observe a whole series of elements of Russian propaganda - oppression of the Russian ethnic minority, Russian struggle against Nazism, distortion of history, conspiracy of the media and the third sector.... politicians who spread pro-Russian propaganda are regular guests of the disinformation media. Although the Russian Federation itself blocks internet

portals that do not correspond to its own propaganda, in Western societies, including Slovakia, it uses the free internet to influence public opinion in a multi-channel way. Nor is it a surprise that disinformation websites have spilled over into political activities and that disinformation is linked to various political parties and movements based on the personal backgrounds of the owners of the entities that represent them. [9] Social networks are often an incubator for the dissemination of hate content and disinformation, to which a substantial part of political advertising is redirected. Political parties and movements in Slovakia that are entitled to state contributions are literally investing taxpayers' money to polarise society and destroy the foundations of liberal democracy. If social networks do not change the way they operate and if the behaviour of users on social networks is not transparent, we will be in a situation where, according to B. Oprala, we will continue to see the rise of an idiocratic society that undermines the basic elements of a democratic society. [10] As P. Krajčovič has pointed out, in recent decades we have seen increasingly sophisticated ways of spreading fake news thanks to the technological development of AI. [11]

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# **ROLE OF COMPARATIVE ARAB LEGISLATION IN ENHANCING CRIMINAL PROTECTION FOR COMMERCIAL COMPANIES FROM ELECTRONIC PENETRATION**

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## **ABSTRACT**

This research focuses primarily on clarifying the reality of e-commerce criminal protection determined for commercial companies against electronic penetration in Arab countries through digital policies to protect multidimensional technological data growth. Despite the opportunities offered by technological progress to digitize electronic system, commercial companies face many risks through their electronic operations that could challenge their continuity and existence due to phenomenon of electronic penetration. Through digital computing systems, information technology and information technology means, hacker exploits weaknesses and gaps in the digital system. The research aims to identify the position of comparative Arab legislation on electronic penetration, and its role in enhancing criminal protection for commercial companies and its effectiveness in reducing electronic penetration and its effects.

To achieve the objective of this research, comparative analytical approach was used to analyze and compare the criminal legal texts in force in the Arab countries and matching it with the reality of e-commerce for some commercial companies that rely on digital operations in conducting their business.

The research concluded the seriousness of the phenomenon of electronic penetration and its effects, Some Arab legislations have considered it a deliberate electronic crime, while some other legislations are still under development of their legislative system addressing cybercrime in general. Thus, the research concluded that there are some legislative deficiencies in some legislation, which requires filling the legislative gap, similar to comparative legislation which has strengthened criminal protection in accordance with the accelerated reality and the requirements and needs of the business community and commercial companies, The research also concluded the importance of activating Arab and international cooperation against electronic penetration to reduce risks, and the need to enhance legal and electronic awareness among workers in commercial companies and business community along with continuous training and qualification.

**Keywords:** *Criminal protection, Commercial companies, Electronic penetration*

## **INTRODUCTION**

Business sector was affected by the global changes societies have witnessed recently, in terms of scientific progress and development in all fields, especially economic and social, in addition to the increasing importance of information in commercial exchanges. Which created an urgent need to replace traditional work methods with advanced ones that meet there needs.

Accordingly, Business organizations also were affected by the environmental challenges they face and take steps for digital transformation processes. To ensure its survival and maintain its stability in the competitive market. Perhaps the most prominent of these is the electronic risks associated with electronic transactions via communication networks in conducting the organization's work internally and externally [5].

Since it has a prominent role in the global economy and achieving sustainable development, all efforts and capabilities must be monitored. To protect it from these risks represented by piracy, hacking, etc., Which in turn requires legislation to enact deterrent laws to ensure its protection.

What are the components and nature of the electronic work environment for organizations, what are the opportunities and challenges it is exposed to, and how has Arab legislation addressed its protection?

### **Aspects of the electronic work environment for commercial companies**

The development was not limited to commercial companies themselves, but rather this development included work methods in terms of their management and organization, as well as methods of dealing with customers and suppliers, because of their suitability, and with the aim of keeping pace with the requirements of the global economy in terms of reliance on technology and communication in business [10], modern technologies contribute to saving time, effort, distance, and cost [5], and achieve achievement and creativity [9].

In addition, digital transformation contributes to the growth and expansion of commercial companies, accelerating production, and hiring experts [14].

Accordingly, Transactions have turned into electronic contracts to speed up the exchange of information and improve quality and performance. Electronic contracts, signatures, electronic payment, etc. appeared. Which necessitates the success of the modern work environment and the prosperity of e-commerce.



Among these manifestations:

E-commerce:

It contributes to achieving economic growth of society. It provides many opportunities for to business sector and commercial companies, by providing services, products, consultations and exchanging experiences, in a world in which the basic feature has become crossing borders in communication between countries through the Internet.

Payment with electronic money:

According to the growth of electronic commerce and the development of its tools, it was necessary to find payment mechanisms that were compatible with this nature. Many electronic payment mechanisms appeared instead of money in fulfilling obligations, which achieves speed in completing transactions and saves the costs of deposit, disbursement, transfer, and long procedures. [13].

Electronic contracts, documents, and remote contracting:

Just as the digital transformation in the nature of the work of commercial companies led to the replacement of their dealings to the modern style, contracts witnessed an increasing growth, due to the ease of concluding and implementing them in the context of electronic commerce, and the spread of electronic markets, in addition to the ease of communication, the development of customer services, and the interaction between the contracting parties. In it, there is negotiation and discussion of the terms of contracts with complete freedom, and this is what gives it privacy in proof, such as the use of electronic signature, and the method of fulfilling the obligations contained therein, which can be said that its legal system is based on the general rules derived from the general theory of obligations, and with its own provisions related to the nature of the subject. About which the contract was concluded [1], [7].

Electronic signature:

It adds authority to proof of electronic documents and contracts, as it fulfills certain conditions, and indicates its owner and the direction of his will to contract, which makes it an important factor in increasing confidence in electronic transactions and commerce and creates the legal effect resulting from it [7].

### **Opportunities, Challenges and Risks**

Opportunities offered using technology in the business environment, and the shift from traditional management to electronic management, creates many challenges and risks. Because it is mostly done via the Internet [9], the movement towards improvement and excellence is considered one of the most prominent

challenges that commercial companies must take into account the procedures for striving towards it [15]; Due to the coincidence of digital transformation with market pressures and requirements and the increased intensity of competition between business organizations, which carries with it many threats at the same time [1].

These challenges resulting from technology on work methods reflect many effects on practices and relationships, which reinforces the need for regulatory laws, compatible with the work environment characterized by continuous change [10], to deal with them wisely and quickly. As it may affect the existence and survival of the organization [15], and to optimally exploit the opportunities offered by digital transformation in the business system, it is necessary to understand its human, technical, organizational and environmental dimensions, and there must be a good understanding of policies, regulations and laws when applying [14].

Accordingly, commercial companies and business organizations must establish sound infrastructure in terms of developing operations at the internal and external levels and develop their policies in accordance with the regulatory legislation, with continuous supervision and control of performance and quality, in addition to the flexibility of strategic plans, continuous assessment of risks and opportunities, and study of the party's position. The third is how to deal with it efficiently [14], [15]. It can be said that one of the most important challenges facing it is the extent of the efficiency of the human element in dealing with digital and technical data in performing its work, and its ability to keep pace with the requirements of digital transformation [9], [5].

In addition to the above, The legal challenges related to the challenge of accepting electronic contracts and their authenticity in proof emerge, in addition to the risks that threaten the security of information and systems and electronic crimes that commercial companies and business organizations of all kinds may be exposed to [2].

These crimes aim to achieve financial profit in most cases, and may be committed either for tampering, entertainment, or to harm the organization for the purposes of unfair competition in business [3]. Perhaps one of the most dangerous threats in this context is the violation of information systems from within the organization itself, and by one of its employees [12]. These challenges do not stop at commercial companies, but also affect the legal system, including the labor law, electronic commerce, and electronic signature, [10], as well as the law. Criminal law, as it is not easy to adapt it to the nature of these crimes, the risks, and the specificity of modern work patterns [4].

### **The Role of Arab Legislative Treatment to Protect against Electronic Hacking.**

To regulate electronic transactions, all countries must establish a special criminal policy. To confront the dangers of crimes resulting from the use of technological means and their resulting effects, especially those related to electronic contracts and dealing with electronic money, and the risks of piracy and electronic intrusions, in order to achieve the necessary prevention against them; To maintain the security and stability of societies [13], and where the effectiveness of criminal policy in confronting criminal phenomena depends on the approach, policies and laws regulating the state, to be compatible with the interest of society [9]. The success of the legal system in place depends on the extent to which it responds to developments and innovations by developing its concepts and flexibility [1].

It is noted that the international flow and exchange of information, and the multiplicity of communication technologies, highlight many legal problems at the level of the business environment, and the risks to which it is exposed. Which leads to the urgent need to establish comprehensive legal protection from electronic crimes and electronic intrusions [4].

This is confirmed by the characteristics of these crimes, such as the ease of committing them and the difficulty of discovering them and assessing their damage, and in terms of the behavior of the criminals in them, the environment in which they occur, and how The criminal uses it, in addition to the ability of legislation to address and confront it [3].

So, What is meant by the phenomenon of electronic hacking and what are its dimensions?

### **Electronic hacking**

Represents electronic hacking; Unauthorized or unauthorized access, exceeding the permission limits, to an information technology means or electronic system, and it may occur from within the organization or from outside it. By reviewing its justifications, it constitutes a dangerous phenomenon that necessitated legislative intervention to confront it.

It is considered a cybercrime because it occurs in cyberspace and by technical means, and its commission may result in significant damage, due to its negative effects on privacy, databases, and security [6].

The phenomenon of electronic hacking is considered one of the most dangerous information crimes. There have been many terms used for the legislative treatment of these crimes. It is noted that the legislator usually does not specify a specific definition of the crime.

However, it does not neglect to define the general and specific elements of the crime, and its original and complementary penalties. Moreover, this crime

cannot be committed without the electronic environment in which the act of illegal entry takes place. It is also difficult to prove due to its nature and the ease of concealment. It crosses borders and requires high techniques, skills and expertise to detect it. This raises challenges when determining judicial jurisdiction, issues of investigation and inspection, prosecuting perpetrators, and judicial cooperation, due to the lack of material evidence and the difficulty of proving it [8].

It poses a difficult challenge to national control and justice systems and requires increased efforts to confront it and keep pace with its rapid development [11].

In most cases in which systems were hacked, it was noted that the perpetrator was an employee of the organization itself, and that he had access authority; But he exceeded his powers and exploited his position for his personal benefit [2].

## CONCLUSION

According to the above, the results can be summarized as follows:

- The seriousness of the phenomenon of electronic hacking and its resulting effects, and its complications.
- Some Arab legislation has considered it an intentional electronic crime, while some other legislation are still developing its legislative system regarding electronic crime in general.
- There are some legislative deficiencies in some legislation, which requires filling the legislative gap, like comparative legislation, which has enhanced criminal protection. In accordance with the accelerating reality and the requirements and needs of the business community and commercial companies, while not expanding or deviating from the principle of criminal legality.
- At the level of criminal trials, these crimes presented some difficulties, especially due to the lack of a specialized judiciary in information technology issues, in addition to other difficulties related to accepting scientific evidence extracted from computers and the Internet, as well as strengthening mechanisms of deterrence and confronting the difficulty of detecting them, as they are either discovered by chance or through... Report it.
- As well as the importance of activating Arab and international cooperation in combating electronic hacking to limit its effects, through international judicial and legal agreements, as the state cannot confront crime alone and in isolation from other countries.
- There is a need to enhance legal and electronic awareness among workers in commercial companies and the business community with continuous training and qualification.

- There also appears to be an urgent need to provide technical protection in addition to legal protection to confront the danger of the electronic hacking phenomenon by strengthening the technical and information structures in commercial companies and business organizations.

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## SOUTH AFRICA – RUSSIA RELATIONS REVISITED

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### ABSTRACT

Moscow has maintained a constant presence in Africa, dating back to the Soviet era. The USSR, together with its satellite states from the communist bloc, such as Bulgaria, got heavily involved especially in the southern part of the continent, in the context of the Cold War. Moscow forged alliances with African liberation movements fighting against the apartheid regime in South Africa. The anti-apartheid struggle in South Africa finally proved to be successful in 1994, which saw the dissolution of the regime and the election of a new government, although the USSR was by then no longer in existence. Ties between post-Soviet Russia and post-apartheid South Africa continued to develop, reaching a high point with South Africa joining the BRIC group in 2010 founded by Brazil, Russia, India, and China. When Russia started its war of aggression against Ukraine in early 2022, the South African government found itself in a difficult situation. How does South African foreign policy relate to the war is the central question of this article. The answer is not as simple, as the war makes it necessary to revisit the complicated relations between South Africa and Russia in detail in order to understand Tshwane's (Pretoria's) choices. South Africa's motivations and actions remain rather misunderstood by political scientists in Bulgaria. This gap in understanding originates from the lack of research on the topic in the country. The aim of this article is to fill that gap by analyzing and explaining the links between South Africa and Russia, from the anti-apartheid struggle to the present day. In the process, special attention will be given to a number of considerations – including historical, economic, military, domestic, and geopolitical aspects – that are vital for answering the central question. The article will refer to sources primarily in English, Russian, Bulgarian, German, and Afrikaans. In the conclusion the key findings will be summarized and possible future scenarios and challenges facing the South Africa-Russia relations will be presented. This will encompass highlighting, among other things, how South Africa's prioritization of good relations with Moscow might harm its international image.

**Keywords:** *South Africa, Russia, Ukraine, war, ANC*

### INTRODUCTION

In Africa, the process of decolonization was, to a significant extent, finished by the end of the 1960s. It marked a vital chapter in African history, as many African nations obtained independence. In some instances, the process was violent, for example, in Algeria. There were certain countries where the colonist regimes decided to maintain their position. Such are the cases, for example, of

Rhodesia (Zimbabwe) and South Africa. In time, resistance was growing, particularly against the apartheid government in South Africa. This resistance was spearheaded by the African National Congress (ANC), which managed to become the ruling party in 1994. Since the relations between the ANC, still governing in South Africa, and Russia – the successor of the Soviet Union, were already positive, they continued to develop in all aspects – culturally, economically, and militarily. In light of Russia's attack on Ukraine, that led to Moscow's international isolation, the Kremlin, more than ever, seeks to remain active on the African continent and keep its allies there. As a strategically important country in Southern Africa, South Africa is essential for Russian interests. This article will first analyze the struggle against apartheid and then move on to post-1994 cooperation, including amidst the war in Ukraine. The Russian war of aggression against Ukraine is the factor that reminded many politicians and political scientists of the importance of these links, as understanding the South Africa-Russia relation is critical to understanding Russian strategy in Africa.

## **THE ANTI-APARTHEID STRUGGLE AS FOUNDATION**

In South Africa, the white minority always constituted a small part of the total population but was in control of the state until 1994. In the mid-1980s, the white population was approximately 5 million out of more than 35 million people [1].

It is crucial to understand how the white minority came to rule over the country. In 1652, the Dutch established themselves lastingly in this part of Africa, starting a colony and expanding it in the following years. At the beginning of the 1800s, the British took over and continued to expand territorially, clashing with the local population.

In time, the descendants of the first Dutch settlers began to develop a new national conscience distinctive from the Dutch one. Subsequently, the Dutch language they spoke developed into a new language that is now called "Afrikaans," meaning "African," and they started viewing themselves as "Afrikaners," meaning "Africans." After the British took over the colony, as mentioned above, tensions between the Afrikaners and the British found expression in several wars between them that ultimately culminated in the creation of a new state known as the Union of South Africa (Unie van Zuid-Afrika, later changed to Unie van Suid-Afrika) in 1910, that practically was a British-Afrikaner run state. Following the First World War, the Union of South Africa de facto annexed South West Africa (Namibia).

For all of South African history before 1994, the white population (regardless of whether British or Afrikaner) was set to maintain control of the country at the expense of the local population, which eventually translated into the policy known as apartheid. It is vital to understand what apartheid is. Although the Union of South Africa was run by British and Afrikaner political elites, continued grievances and political rivalry persevered. In 1948, the Afrikaner



ultranationalists, led by Daniel Malan and his National Party (Nasionale Party), rose to power. From that point onwards, they started to implement the apartheid doctrine.

Apartheid is an Afrikaans word that means "apartness", indicating that race groups should be separated from each other. In practice, it is designed to give privileges to the white population, particularly the Afrikaners. Essentially, it can be regarded as a system of institutionalized discrimination based on race as the defining factor. It built upon legislation already in existence in the Union of South Africa, such as laws that practically reserve parts of the land for the white population only, restrict movement for anyone who is not white, reserve areas in cities only for whites, to mention just a few. However, apartheid meant an expansion of the legislation to encompass practically every aspect of life in the country to a never-seen extent. Some of the apartheid laws included (but were not limited to) the prohibition of marriages between different races, the creation of quasi-states (known as bantustans) where the black population was relocated, the establishment of different bus stops, beaches, according to race, mandatory registration of one's race, and many others.

As it can be concluded, everyone who was not white was excluded on political, economic, geographical, and social levels. In this situation, the black majority did not even possess voting rights that would enable it to partake in the government of South Africa.

Eventually, this led to organized resistance among the black population that sought to upend apartheid and its practices. The resistance movement was led by the African National Congress, which was founded soon after the establishment of the Union of South Africa. In South West Africa, the resistance was organized by SWAPO - the South West Africa People's Organization. These organizations were heavily influenced by Soviet communist ideology.

In the first years of the existence of the USSR, Southern Africa was not among the priorities of its foreign policy. Although relations between Moscow and the ANC were established in 1927 [2], the Russians only showed a heightened interest in the Southern African region in the context of the Cold War and the African decolonization, most notably from the 1960s onwards. The primary motivator behind this is that the Kremlin sought to expand its influence worldwide and export its communist system abroad. In accordance with this, a core concept of the Soviet African policy was to support local liberation movements in their struggle to decolonize, more specifically in their fight against the racist apartheid regime present in South Africa, but also anywhere on the continent it saw an opportunity. The goal was to establish states throughout Africa, based on the Soviet model, that, by default, would be sympathetic to the Russians. This was done in order to oppose the other major superpower in what was back then viewed to be a bipolar world – the United States of America. Whereas the United States

and its allies had established functioning democratic systems, the Soviet Union was an authoritarian state, as were its satellite/allied countries.

The countries in Southern Africa that had yet to decolonize by the early 70s, next to South Africa, were Angola and Mozambique (under Portuguese rule), and Rhodesia. This meant that the Pretoria government had, from its perspective, friendly governments on its borders – countries that had, for all intents and purposes, regimes similar to apartheid.

The global situation changed rapidly in 1974 when the Estado Novo regime fell in Lisbon. This led to the independence of Mozambique and Angola, and a chance for the USSR. In post-Estado Novo Angola, the People's Movement for the Liberation of Angola (MPLA) secured control of the country with Soviet and Cuban (acting as Moscow's proxies) help. As Van der Waag notes, Moscow sent instructors, aircraft, whereas Cuban armed personnel dispatched were around 50,000 [3].

The Pretoria government got militarily heavily involved in the region against what it perceived as a communist threat on its borders, where new Soviet-friendly states were emerging. Subsequently, it framed its foreign and domestic policy through the prism of fighting communism/sovietism and banned the ANC because it perceived it as a communist organization. In accordance with this, the Pretoria government envisioned installing a friendly government in Luanda, so it invaded Angola, but could not curtail the MPLA coming to power. Angola and Mozambique becoming Soviet allies was also key since the ANC could train there. The new government in Zimbabwe (former Rhodesia) also supported the ANC from the 1980s onwards, just like Mozambique and Angola, as it obtained independence and joined the Soviet sphere of influence.

As Shubin, explains in his book on the Cold War in Africa and the USSR's involvement, the Soviet help to the ANC encompassed financial support, training in the Soviet Union and Angola, arms shipments, continuous support through resolutions in the UN [2]. Soviet support towards the ANC was also organized through the so-called Soviet Afro-Asian Solidarity Committee, which equipped the ANC with everything from medicine and clothing to cars [4].

The Soviet policy was also reproduced by its satellite states, such as Bulgaria, which extended serious assistance to the liberation movements in the southern part of Africa (especially to Angola) in the form of finances, arms, and supplies, including to the ANC [5].

It is crucial to understand that the ANC's capacity to confront the South African military effectively, galvanize opposition against apartheid, execute successful insurgency campaigns, and ultimately play a significant role in attaining democracy in 1994 was largely due to the support of the Soviet Union, albeit partially channeled through various intermediaries such as the Cuban army

and other communist countries. Furthermore, Soviet participation was instrumental in bolstering the Angolan army's ability to thwart South African military action on Angolan soil.

## **THE FRIENDSHIP ENDURES**

After the end of the apartheid regime in 1994 in South Africa, for which the ANC as a liberation movement had an indispensable merit, relations between post-Soviet Russia and post-apartheid South Africa continued to develop, built on the impulse and tradition from Soviet times. It is true that after the collapse of communism, Moscow encountered considerable economic and political complexities, coupled with a substantial decrease in resources and sway in comparison to the Soviet era. Thus, for a long time, Russia was experiencing difficulties in maintaining its previous clout in Africa. However, the Kremlin was waiting for a more favorable moment to reignite its ambitions. This moment arrived with the rise of Vladimir Putin to power in the late 1990s. From that point onwards, Russia has been trying to intensify traditionally good relations in the region, dating back to Soviet times. Among the countries receiving attention in this regard is the ANC-led South Africa.

Moscow effectively managed to position itself as a central factor in the dissolution of apartheid and, so, a principal friend of the ANC. Since many of ANC's personnel and leaders had studied or trained in the USSR, they helped foster and maintain Russian-South African ties throughout the years. One example of this is the former South African President of the ANC Thabo Mbeki, who received training in the USSR, just like another former South African President, Jacob Zuma, did.

The Russian embassy in Tshwane (Pretoria) lists several pillars that define the mutual ties in recent years - these include the establishment of multiple agreements covering various areas such as agriculture and energy. Among the significant milestones in this partnership are the Treaty of Friendship and Partnership of 2016, as well as the Strategic Comprehensive Partnership statement and declaration of 2018 and 2013. Furthermore, an Intergovernmental Committee on Trade and Economic Cooperation has been created, and a number of Russian companies are currently operating within South Africa [6]. That shows that there is a high level of stability in the current partnership between South Africa and Russia.

When Russia invaded Ukraine in 2022, South Africa remained careful in criticizing Moscow – in March of 2022, it abstained during a vote at the United Nations on a resolution that condemned Moscow's aggression. Russia's Minister of Foreign Affairs Lavrov was welcomed in Tshwane (Pretoria) in January 2023 [7], and later this year, a military exercise was held between South Africa, Russia, and China in South African waters [8]. In addition, Russia has not been subjected to South African sanctions relating to its war in Ukraine. Moreover, the South

African President has already made an effort to assign responsibility for the war to NATO [9]. Additionally, the South African Foreign Minister has made it clear that the South African government regards Russia as a friend [10].

Nevertheless, South Africa still endeavors to position itself as an impartial intermediary willing to facilitate a peaceful settlement of the conflict, as South Africa's President Cyril Ramaphosa spoke in favor of ending the war diplomatically when he led a delegation of African states to meet Russian President Vladimir Putin in Saint Petersburg and Ukrainian president Volodymyr Zelenskyy in Kyiv in June 2023, as reported by Deutsche Welle [11]. However, it is clear that Russia has no interest in diplomacy, but instead in the total destruction of Ukraine, and being impartial/neutral in this context might be interpreted as passively agreeing with Russia.

## **CONNECTING IN BRICS**

Since Russia is now on the road to becoming a de facto pariah state, the Kremlin is exploring avenues for a way out of its isolated constellation. It is thus focusing heavily on Africa in search of allies and on its role in BRICS, relying on using historical ties, particularly in the case of the ANC, to strengthen and further cooperation.

The collaboration's high point is South Africa and Russia's membership in the BRICS (Brazil, Russia, India, China, South Africa) group of countries.

During the latest BRICS summit in Johannesburg in August 2023, an enlargement of the group was announced. Whereas pre-invasion BRICS seemed to be an informal economic coalition, with Russia's continued active role in it and the new expansion, it now might begin to look like a group that is at least partly anti-Western and anti-democratic. Note that of all members (Brazil, Russian Federation, India, China, South Africa, Egypt, Argentina, Iran, Ethiopia, Saudi Arabia, United Arab Emirates), Freedom House [12] only assesses 3 of them as free countries (Brazil, South Africa, and Argentina), meaning that they can be considered democratic, in terms of political rights and civil liberties.

Russia's membership in BRICS is beginning to weigh on the organization and negatively impact the international image of its other members. By extension, the international image of South Africa suffers in light of Russia's war, too.

Nevertheless, despite historical relations and BRICS, the most significant economic partner of South Africa is not Russia. According to the South African Revenue Service [13], China, Germany, and the United States are its three main trade partners, per import and export statistics. South Africa is not Russia's priority trade partner either. According to information from the Russian state media outlet TASS, the number one trade partner in Africa is Egypt, and South Africa only comes fifth [14].

However, all of the abovementioned shows that Tshwane (Pretoria) seems to be leaning towards Russia in this conflict, or at least that it is not as neutral and impartial as it tries to present itself.

Next to official foreign policy considerations, it is worth exploring how South African citizens as a whole perceive Russia. Although Moscow has had a vital role in defeating apartheid, supporting the ANC in its struggle, nowadays, it appears that the current perception of Russia among many South Africans is not entirely positive. A recent survey conducted by the Pew Research Center shows that 57% of South Africans have a very unfavorable or somewhat unfavorable view of Russia, while 28% have very/somewhat favorable view [15]. Such results are most probably provoked by Russia's invasion. This may lead to the conclusion that the ANC government's policies when it comes to Russia are biased based on history and do not necessarily depict the current attitude within South African society at large in the context of the ongoing war in Ukraine.

## CONCLUSION

This article sought to revisit the relations between South Africa and Russia in light of the war in Ukraine. Subsequently, it was shown that South African foreign policy relates to Russia's war of aggression against Ukraine through the prism of historical legacy. The governing party, ANC, has had connections with the Russians for 96 years now. Russian support in the region in general and concretely to the ANC proved vital in the fight against apartheid. This fact is central in the South African government's foreign policy, which is why cooperation between Russia and South Africa continues unhindered through a wide range of areas, from the economy to the military.

With general elections coming up in South Africa in 2024, the question about the relation to Russia is going to be more present on the agenda. Although the ANC has been continuously losing voter support over the course of the general elections since 1994, it is unlikely that any of its contenders, most notably the Democratic Alliance, will be able to dethrone it anytime soon. And while South Africans generally seem to have a rather unfavorable opinion of Russia, to the ANC leadership and its electoral base, the relation to Moscow is of the utmost importance, not so much because of economic or geopolitical considerations, but because of historical legacy. Henceforth, it seems improbable that the South African government will alter its position on maintaining amicable relations with Russia, as long as the ANC remains in office, despite any possible backlash from Western countries, concerns over a negative impact on reputation, or potential economic troubles in the future.

Subsequently, it can be concluded that Moscow utilizes the past to shape the present, as it positions its relations with many African countries on the basis of the assistance it provided to them in the process of decolonization. Although Moscow's abilities in Africa are not on par with those of the former Soviet Union,

it remains deeply committed to expanding its influence in the region, as it did during the Cold War.

The South African case demonstrates how old historical ties with Russia might be challenging to break because of certain political circles. A conclusion that seems valid for some Eastern and Central European countries as well, notably Bulgaria, despite of its geographical distance to South Africa.

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# **THE IMPACT OF DEVELOPING THE SMART LITIGATION SYSTEM IN CONSOLIDATING THE RIGHT OF DEFENSE FOR LITIGANTS IN COMPARATIVE ARAB LEGISLATION**

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## **ABSTRACT**

This research focuses on presenting the procedures of the smart litigation process in the special civil courts, as with the expansion of international relations and with the global openness to trade and economy and the encouragement of foreign investments in all countries, in addition to the spread of immigration and ease of movement and others, with the development of digital transactions and the multiplicity of artificial intelligence applications, and the diversity of transactions and contracts between members of all societies, wherever they are, many legislations have tended to adopt smart litigation or what is known as remote litigation, in the hope of solving many of the problems facing litigation procedures in its traditional stages directly before the courts, as this research came to stand on the reality of this type of litigation and to provide an explanation of the pros and cons of smart litigation processes and procedures, and the multiple effects that it has on the rights of litigants during litigation processes, starting from the stage of filing and announcing the lawsuit to the stage of final judgment and the stage of implementation.

Whereas the current research reviews the Arab legal legislation governing smart litigation based on the procedures followed and compared in terms of text and application.

The research used the comparative analytical method, to scientific analysis and scientific comparison between the Arab legislation governing smart litigation, through the analysis of procedural legal texts governing the stages of litigation. And study the case of some civil cases that were carried out through smart litigation in the special civil courts in some Arab countries.

To clarify the effects of this advanced type of litigation on the rights of litigants and on the stability of transactions and the consolidation of prompt justice in general and the consolidation of the right of defense. As well as to determine the ability of the legislator in the Arab countries to solve the problems resulting from litigation of all kinds. And its ability to address the shortcomings in the stages of the course and progress of the case to preserve the rights of litigants and the stability of transactions in society.



**Keywords:** *Smart Litigation, Remote Litigation, Right of Defense, Artificial Intelligence*

## INTRODUCTION

The world has witnessed many developments in all areas of life, including the expansion of communication networks, technological development, in addition to artificial intelligence techniques and expert systems, which resulted in the trend of transforming the traditional lifestyle into a new lifestyle that relies on these means and tools, as traditional transactions began to be replaced by transactions. Electronic and moving to the stage of digital transformation gradually.

The judiciary was not far from this, as it was necessary to take serious steps to implement digital transformation processes in the judicial system, [15], leading to remote litigation (smart litigation). To keep pace with these developments and establish justice in society, the process of developing it is not an easy matter, as there are many challenges and obstacles that affect its effective application, in addition to the fear of its impact on human rights in litigation [1].

Whereas the right to litigation is one of the basic rights in international and regional charters and various legislations, and it entails enabling a person before the judiciary to access his rights and protect him in all stages of litigation procedures, and for this reason this scientific paper came to demonstrate the impact of developing smart litigation in establishing the right of defense for litigants in comparative legislation, What is its meaning, and what are its characteristics? What are the requirements for its application to achieve justice in society?

### **The concept of smart litigation**

Some jurists tended to define it in terms of litigation procedures [14]. Or in terms of the desired goal or based on its meaning [12]. It is a modern information judicial system that relies on information technology means, modern technology, artificial intelligence applications, and expert systems in cyberspace to implement the usual litigation procedures, starting from registering the case initially to implementation, and it may be applied partially or completely [15].

### Characteristics of smart litigation

Smart litigation is characterized by several advantages that distinguish it from traditional litigation, including:

- Moving from traditional paper dealing to electronic paperless dealing and relying on information technology means and artificial intelligence applications in litigation procedures, such as audio-

visual communication technology in court sessions, and electronic payment techniques, which allows proving electronic transactions and electronic documents through legal means of proof such as electronic certification and signature. Electronic [1].

- Save time and speed in exchanging documents, papers, and litigation procedures, without the need to move to the court building [4]. Reducing expenses and saving efforts for all parties [13]. The possibility of directing litigation procedures from registration to implementation in a secure manner that fulfils the pillars of information security [3]. Improving the quality of judicial and legal services by simplifying them, increasing their flexibility, and raising the efficiency of judges and administrators in judicial work [8]. Reducing the accumulation of cases in the courts, speeding up their processing and decision, and saving judicial time [2], [3].
- It contributes to increasing transparency and combating corruption by reducing human interference in litigation procedures and thus enhancing confidence in the judicial system. Facilitating transactions between the government and private sectors, in addition to unifying efforts between government departments using a unified electronic portal that provides all services. It also enhances social communication so that all judicial activities and various sessions are activated, and easily announced and legal awareness is spread in society [2].

Conditions for applying smart litigation.

Its use must adhere to certain conditions, to achieve justice and facilitate judicial assistance between countries, including:

- Providing human, material, and technological means and capabilities, and continuous qualification and training, in addition to providing the latest devices, technology and software to enhance security and provide technical protection for it, as well as securing a solid infrastructure for it, so that it helps the state implement it with high efficiency [2].
- Adapting the use of the smart litigation system to the country's law and legislation, considering the rules of international and regional jurisdiction, adhering to judicial and legal agreements to achieve the highest level of judicial assistance between countries, and developing legislation in the country in line with the requirements of technological development through amending applicable laws, or enacting special legislation and laws. It is compatible with the smart litigation system and its requirements to achieve justice [8].

### **Challenges facing smart litigation.**

There are some difficulties facing its effective and efficient application, including:

- Fear of exposure to piracy and electronic intrusions, especially when there is a lack and weakness of technical capabilities, and a lack of expertise that is compatible with technical means that rely on precise algorithms that require high competencies, in addition to the efficiency of the system used, the quality of the communication network, and technical protection programs such as encryption techniques. It is necessary to Continuously updating its protocols to enhance the cybersecurity of the smart judicial system [13].
- The need to establish a solid infrastructure for its use requires allocating huge financial resources, especially since it is necessary to use internal networks between courts and judicial bodies that are separate from the external communication network (the Internet). It also includes infrastructure; The applicable legislation and laws, the slowdown in amending and developing them to suit and suit the needs of technological development, poses a major challenge to its consolidation [11].
- Fear that its application may lead to compromising the principles of justice, the conditions for a fair trial, and the guarantees for litigants, which are guaranteed by all constitutions and legislation [4].

### **Smart litigation procedures**

Given the reality of the situation regarding its use in Arab legislation, it has been observed that it is widely applied in some countries, while some of them have permitted the application of a certain number of procedures through it, while continuing to rely on the traditional system of litigation, and others have not applied it to date.

The procedures can be briefly reviewed as follows:

Registering the case in the court's electronic record: The customer enters the court's electronic website, logs in by filling out his data in the system, then browses the judicial services, chooses the type of service required, determines the type of case, and begins filling out the unified application form (claim sheet, which is the same as in traditional litigation). Under the same conditions), his data, facts, and requests, and then attaches his documents and documents supporting his request, confirming his chosen address for notification (announcement) to him and the defendant, and he also pays the fees [5].

Studying the application and checking the documents by the competent employee: The case management office then studies the application and verifies

the authenticity of the attached documents and makes the decision either to accept or reject when there is no legal basis for filing the lawsuit. In the event of acceptance, he will be notified of this, and the lawsuit announcement will be sent to the defendant, and the lawsuit will be determined. A period for the defendant to attach his documents and his opening defense memorandum, and at the same time the case management office transfers the electronic case file to the competent judicial department in the court for consideration.

Preparation stage for the first session of the trial: Then the secretary of the competent judicial committee sends a letter to both the plaintiff and the defendant explaining the date of the session to consider the dispute. The trial takes place remotely using audio-visual communication technology, where the parties enter through the link that is provided to them, and the Verifying their identity directly, and in the event that all parties are present and with the same pleading procedures in traditional litigation and with the legal conditions and judicial guarantees [6] each of the parties, according to his role after being called upon, submits his statements and defences, and the secretary of the session records the minutes of the session and everything that takes place in it, This report is signed by the judge examining the case, and if the statements are complete, it can be decided on the same day or postponed to a later session to complete the evidence or memorandums or postponed by the parties according to their nature. After the issuance of the ruling, the litigant against whom the ruling was issued can appeal it electronically within the legal time limit. In the event of no appeal, the case and the ruling are referred to the Enforcement Department electronically for implementation and follow-up by the competent Enforcement Department. Customers can also use all the judicial services available in traditional litigation, such as submitting interlocutory requests, performance orders, etc.

### **Guarantees for litigants in electronic lawsuits in the smart litigation system.**

From what was mentioned above in the statement of procedures in electronic litigation, the guarantees of litigants guaranteed by constitutions and legislation are considered in smart litigation procedures, despite the fear among some of violating them when using them. Among these principles are:

The principle of publicity and orality of the court: that the trial is conducted publicly in the presence of the public and its knowledge of its procedures, which is a guarantee for the defendant [6], so that public opinion's oversight of the judiciary is achieved, which establishes confidence in him, and achieves the goal of applying punishment for general deterrence [9]. Justice is established for all parties by not violating this principle during trial procedures through technical means [13]. As for the orality of the court, everything that happens in it is public, and the discussions, statements, and defences that are said in it are audible [10].

The principle of prima facie between the parties: the pleading must either be in person, that is, in the presence of the parties at the trial, or in absentia in the event of the absence of one of them [13]. Where each party confronts the other with the evidence it must support its position and statements, in the presence of the judge and the public [9], and it is not permissible to judge a party without having been properly notified under penalty of invalidity [10].

Respecting the rights of the defense: This is by enabling the accused to defend himself, either by proving the corruption of the evidence or rebutting it by proving his innocence [9], which is his right to debate his opponent with the evidence he presents [10], which helps the judiciary in identifying the incident and its truth in order to pronounce a just and sound ruling. .

The principle of equality between litigants before the judiciary at all stages: that each party is given opportunities to present what it has and discuss its evidence and documents regarding what it claims, equally among all, so there is no discrimination based on gender, color, or anything else [12].

#### **The legal basis for smart litigation in some comparative Arab legislation and application experiences:**

- **In Algeria:** The legislator adopted it in Law No. (15-03) to modernize and digitize justice by stipulating: creating a central information system for the Ministry of Justice and certifying the authenticity of electronic documents, sending documents and judicial procedures by electronic means, and procedures and conditions for using remote video chats. An internal communication network was used between... Judicial councils and courts at all levels, so it became possible to appeal rulings at the council level, and to view the filed case file without the hassle of going to court [14].
- **In KSA:** It has been widely applied, and the Jeddah Court is considered the first court in the Kingdom to operate with a comprehensive electronic litigation system from the filing of the lawsuit to the issuance of the judicial ruling. Among its applications are the electronic portal for the Board of Grievances, which provides a set of electronic services, including (the Knowledge Window), which includes the laws, regulations, and regulations that it needs. It has the judge, the lawyer, and all parties [7], and the unified portal on the Ministry of Justice website to provide all services electronically, in addition to using the Najez application, which is constantly being developed by a specialized team in the portal [11].
- **In Egypt:** Serious steps are being taken towards its adoption, in terms of creating websites, government applications, and electronic portals to provide judicial services electronically. Law No. (146) of 2019 for economic courts constituted the first stage of digitizing

these courts. However, it is not enough. There must be detailed legal regulation of electronic litigation, at the level of laws. Civil and criminal procedures and special laws [5], and it is currently noted that most of the services of the Court of Cassation, Courts of Appeal, and Courts of First Instance are now available electronically [7], but there is still the problem of how to implement that system in the absence of its own legislation that guarantees no violation of the principle of guarantees. Litigation [10].

- **In the United Arab Emirates:** It is one of the first countries to develop the justice system to achieve the state's strategic goals with complete digital transformation, as the Case Management Office was established, with the aim of facilitating litigation procedures, and information technology means are widely used in litigation [5], [7], Whereas the smart litigation system is based on a solid legal foundation represented by the Constitution and laws that are being amended to keep pace with all developments, including the Civil Procedure Code, to which Chapter Six was added in the last amendment entitled The Use of Remote Communication Technology in Civil Procedures, and includes 12 articles from (332-343), specifically for electronic procedures, and the legislator left the rest of the details to the regulatory regulations, and its articles included all electronic trial procedures, the exchange of advertisements and documents, as well as remote procedures with foreign countries, the Electronic Transactions and Trust Services Law No. 46 of 2021, Federal Law No. 34 of 2021 Combating Electronic Crimes, and other relevant laws. Relevance. In addition to establishing the digital court, which conducts its sessions by preserving the guarantees of litigants and the basic principles of litigation [15].
- **In Qatar:** Its application is based on many relevant legislation and laws, including Law No. (24) of 2017, Law No. (3) of 2019 amending some provisions of the Civil and Commercial Procedures Law, and Law No. (4) of 2019 amending some provisions of the Judicial Authority Law, while adopting the national strategy in the field of artificial intelligence and preparing specialized cadres and the judicial authority. Efficiently [12].

## CONCLUSION

There is a difference in jurisprudence in defining the concept of smart (electronic) litigation.

The smart judiciary in some Arab countries is based on a solid and strong foundation, in terms of legislation and legal organization, and in terms of capabilities, expertise, and judicial, administrative, and technical competencies.

However, in some other Arab countries, it still requires a lot of effort to develop it in line with developments to consolidate the rules of justice in society.

In addition, it works to consolidate the rights of litigants in electronic litigation, when applied correctly, with monitoring and supervision by the competent authorities and working to constantly develop the technical protection systems for the judicial system.

In addition to the necessity of producing specialized training and rehabilitation programs for judicial specialists, administrators, and technicians, as well as directing legal awareness and knowledge campaigns for all individuals in society, to facilitate its proper use.

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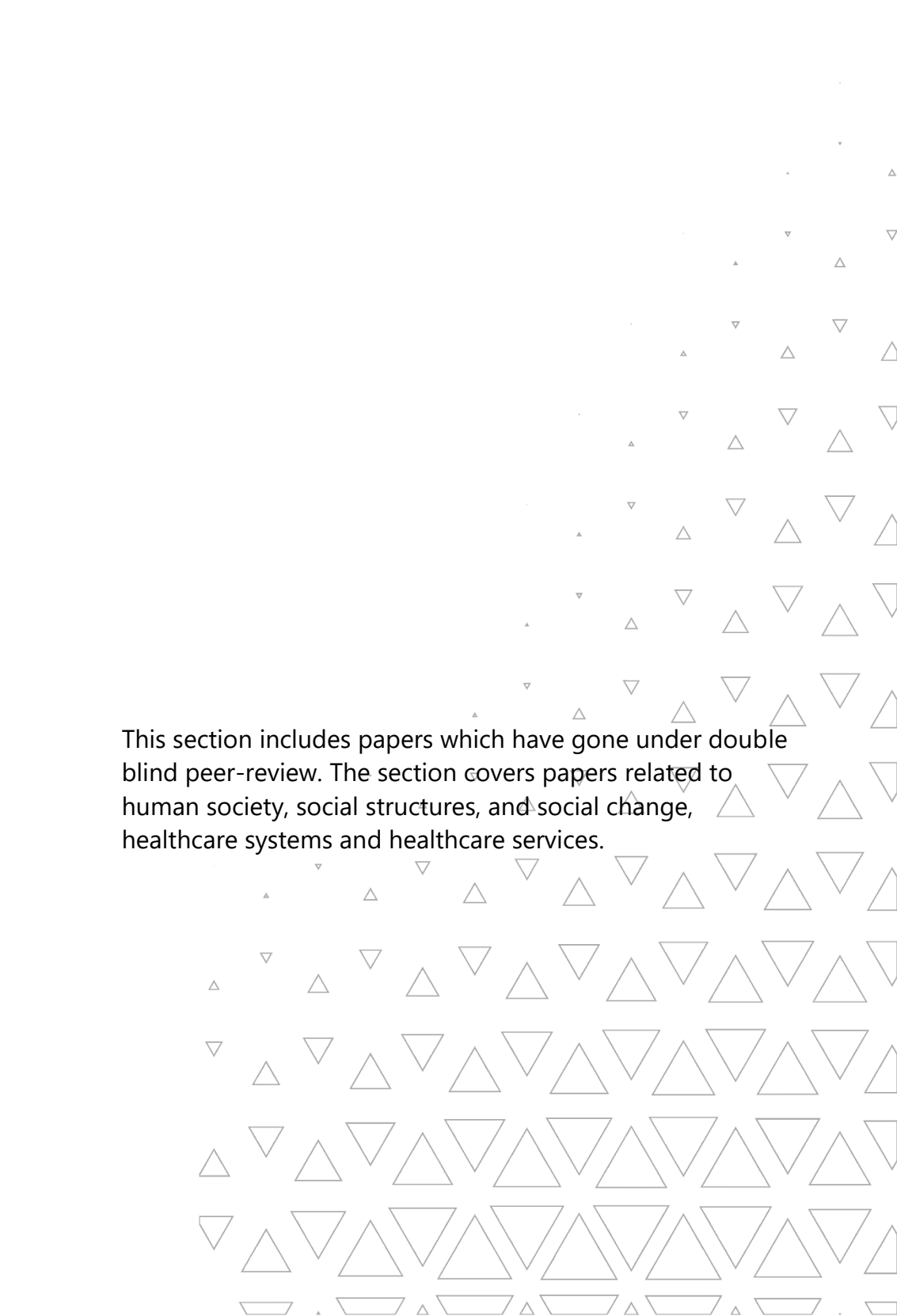
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## **Section**

# SOCIOLOGY AND HEALTHCARE

The background of the page is decorated with a pattern of small, light gray triangles. These triangles are scattered across the entire page, with a higher density in the lower half. Some triangles are pointing upwards, while others are pointing downwards, creating a subtle geometric texture.

This section includes papers which have gone under double blind peer-review. The section covers papers related to human society, social structures, and social change, healthcare systems and healthcare services.

## BEING POOR: FIRST-PERSON EXPERIENCES

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### ABSTRACT

This research is the result of a qualitative study that aims to analyse how poor people experience their situation. This study has the following general objectives: i) To analyse the life course of the subjects interviewed and their perception of poverty; ii) To understand how the people experienced situations of poverty. The specific objectives were a) To understand the heterogeneity of those categorised as poor; b) To understand the life journeys of people living in poverty; c) To understand how the subjects view their social reality; d) To analyse common indicators in the responses obtained in the study. Semi-structured interviews were carried out to realise the objectives. By getting to know the condition of individuals living in poverty and the main problems involved, it is possible to (re)structure and adopt possible more efficient interventions/strategies, meeting the real needs of citizens.

**Keywords:** *Poverty and exclusion, perspectives on poverty, life paths, poor people experience*

### INTRODUCTION

This brief study sought to highlight and give a voice to people living in poverty through discourse, observation, and analysis. In this way, the aim was to i) analyse the life course of the subjects interviewed and their perception of poverty and ii) understand how situations of poverty are experienced in the first person. To this end, a set of specific objectives was drawn up, namely: a) to understand and demonstrate the heterogeneity of those who are categorised as poor; b) to understand the life journeys of people living in poverty; c) to understand how the subjects view their social reality; d) to analyse common indicators in the responses obtained in the study.

To study and understand the experiences, discourses and life trajectories of people living in poverty, qualitative research was used to value interpretation, meanings, and social contexts, offering a broader view of human experiences. The data collection instrument used was the semi-structured interviews, consisting of a set of open questions that were only asked if the individual's discourse did not refer to a dimension that we wanted to study. Analysing people's life journeys is essential to get to know, in the most in-depth way possible, the moments that marked their trajectory and to analyse some of the stages that could have led them to their current situation. In this context, all the interviewees were asked to share their life experiences and highlight the moments they considered significant.

We interviewed 4 individuals (E1, E2, E3, E4) who were supported by a social institution in the municipality of Seixal (Portugal) and who volunteered to take part in this study.

## **POVERTY AND SOCIAL EXCLUSION**

A socio-economic approach associates poverty with a situation of deprivation resulting from the lack or insufficiency of economic resources and, consequently, the fulfilment of basic needs. However, questioning how poverty affects each person leads to a subjective dimension, without which there is a risk of ignoring relevant aspects of the problem (Fernandes, 2012, p.36)[1].

Bruto da Costa (1998)[2] highlights different perspectives on poverty, of which two stand out: i) absolute poverty, based on the notion of basic survival needs, with various dimensions inherent to the notion of resources such as food, housing, clothing, income, etc. being at stake. From this perspective, absolute poverty is an objective, measurable and universal condition, measured by indicators such as income, level of education, and access to health services, among others. In this concept of poverty, there is a lack of or almost total restriction of basic subsistence conditions. It is possible to say that this is a type of persistent poverty; ii) relative poverty, defined as a lack of resources compared to the average of the society in which one lives. This type of poverty is influenced by factors such as the social and cultural context in which people live, their expectations and aspirations, and comparison with other social groups.

The most common way of identifying a person in poverty or a socially excluded person is to assess their objective living conditions. This is the most visible aspect of the problem. Although it is not the "whole" of the problem, it is clear that material deprivation is a worrying problem and its effects affect the human being as a whole: feelings, affections, emotions, attitudes, habits and behaviours, interpersonal relationships, daily uncertainty (meals, income, etc.), the exercise of citizenship, fulfilling one's duties and enjoying one's rights (Perista and Baptista, 2012)[3]. Despite this, it is now imperative to consider the multidimensionality of the concept of poverty, as Bruto da Costa et al (2008)[4] point out: "It should be noted that defining the poverty line in terms of the income needed to meet basic human needs does not reduce poverty to a purely financial reality. The lack of income leads to a situation in which basic needs cannot be met, which in turn creates an existential situation that affects the most diverse and profound aspects of human life and personality" (cited in Fernandes, 2012, p.39).

Despite this multidimensionality, Serge Paugam (2006)[5] reminds us that similarities persist with the way of thinking about poverty from other centuries. On the one hand, "we have not completely freed ourselves from the tendency to categorise the poor into the deserving and the undeserving. On the other hand, we continue to see the problem centred on the excluded" (p.75).

The expression "social exclusion" can be understood, according to Luís Capucha (2005)[6], from two different connotations. one of French origin, which emphasises the nature of the social ties that give cohesion to society and another that is based on the rights to participate in different spheres of social life as citizenship rights. The first approach sees social exclusion as occurring when there is a set of ruptures in social ties with the current institutions of society, which can result in the deterioration of identities, the disorganisation of social relations and, ultimately, the social relationships and, ultimately, complete isolation. French sociologist Robert Castel represents social exclusion as the extreme state of a process of marginalisation in which ties are broken between the individual and social systems, the ties with the labour market and those that bind the individual to family and friends. In this conceptualisation, social exclusion is seen as a multidimensional, cumulative and structural process, i.e. social exclusion is the breaking of social ties (Vasconcelos, 2011)[7]. The second approach understands that social exclusion occurs when a person is deprived of their citizenship rights, "it is to be a "non-citizen", i.e. a member of society who has been deprived of citizenship rights (Vasconcelos, 2011, p12) and participation in the different spheres of social life. From this perspective, being integrated means sharing the condition of citizenship with the other members of society and participating in the normal processes of life in society.

According to Bruto da Costa et al (2008), "poverty is a form of social exclusion, but social exclusion may not necessarily imply forms of poverty" (p.15). In modern Western societies, poverty and social exclusion are mutually reinforcing. Poverty and social exclusion characterise Portuguese society. The high number of individuals in this situation over the years indicates this.

It is now known that "poverty is generated by society, it is generated by the configuration of society and, therefore, without social changes it is not possible to solve the problem (...) so anything that contributes to giving the idea that it is possible to solve poverty by keeping the rest of society as it is is pure illusion and would be a very serious irresponsibility of local intervention" (Reis, 2010, p. 21)[8]. In this way, "if we want to tackle the problem as a whole, we shouldn't only have actions aimed at people, only at people, leaving the whole environment with a lack of infrastructure at all levels, economic, cultural and social" (Bruto da Costa et al, 2018).

## **POVERTY AND SOCIAL EXCLUSION IN THE FIRST PERSON**

Of the four interviewees, two were male (E1 and E2) and two were female (E3 and E4).

When analysing the profile of the four people who were interviewed, it emerged that one had a 3rd-grade education, another had a 7th-grade education, another had finished secondary school (12th grade) and one had a degree. It should

be noted that interviewee 4, who has a 3rd-year degree, did not continue with her studies due to the lack of permission from the Roma community. It is important to emphasise that she said that she would not allow her children to face this same restriction because she knew the consequences. E2, who is in 7th grade, says that the extreme poverty he faced in São Tomé prevented him from dedicating himself to his studies and forced him, from a very young age, to work in the fields to help his family.

The main factors pointed out by the interviewees as the cause of their situation of poverty are unemployment (identified by 3 of the interviewees), precarious housing (identified by all the interviewees) and low educational qualifications (identified by 2 of the interviewees). It should be noted that one of the interviewees is working, although his income is insufficient to meet his family's basic needs. This interviewee (E1) says that he "used to live very well" but, despite having a degree, a series of unexpected events in his life have negatively affected his financial and emotional stability.

Regarding the number of people in the household, there was a wide variety: E1 lives with two children, E2 lives alone, E3 lives with her partner and eight children and E4 lives with her partner and four children. A study by Nuno Alves (2009)[9], entitled "Novos factos da Pobreza em Portugal", identifies the number of people in households as one of the explanatory factors for the existence of two million people living below the poverty line (including 300,000 children). This association between poverty and large families, along with individuals with lower levels of schooling, is evidenced in this study.

About their journeys, when reflecting on the defining moments of their lives, it became clear that these journeys were characterised by not being linear. Some events and episodes seem to have influenced, at least in part, the trajectory marked by the experience of poverty. However, applying the concept of a pattern to the various stages and episodes of life seems incoherent, as the way each interviewee views their perspective on life is subjective and unique.

E3 and E4 reported that the most memorable moment was the birth of their first child and the vitality of their lives, marked by hope for a better future. While E1 and E2 consider the most significant moment to be the feeling of stigmatisation and the breaking of emotional ties with their families. However, leaving school early was also mentioned, as well as living in the Jamaica neighbourhood (mentioned by three interviewees), being sentenced to prison and the (ineffective) intervention of social institutions throughout their lives. As Bruto da Costa et al (2008) point out, in addition to deprivation and lack of resources, the life context of people living in poverty also affects their life context and aspects of their personality. Thus, "habits change, new behaviours emerge, values change, culture transforms, survival strategies are rehearsed, the initial revolt gives way to conformism, self-confidence weakens, the network of relationships changes, social identity is lost, and eventually personal identity" (Reis, 2010, p.20).

When asked how they spend their day, the three interviewees who were unemployed said that they spend their days doing domestic tasks, resulting in a daily life that is practically limited to the home. The experience of poverty cannot be separated from social life as a whole. However, when there is a break in the labour market, the consequences go beyond the immediate loss of income. There are indirect impacts, including those of an emotional nature, which affect social relationships and, in many cases, these people experience a significant decrease in their participation in the collective activities of the communities in which they live. In addition to being confined to domestic chores, the interviewees have a routine that includes travelling to social institutions, along with tasks such as taking their children to school and, in the case of E1, reading and writing.

The relationship between structural unemployment and human rights lies in the fact that decent, paid work is considered a fundamental human right. Prolonged unemployment can jeopardise people's ability to enjoy other human rights, such as the right to adequate food, housing, education and health.

The sociability networks of the people interviewed are mainly interpersonal relationships centred on the family, who generally share the same household, as is the case with E1, E3 and E4. "It is therefore pertinent to state that the inequalities of today's society seem to strengthen informal solidarity networks, with a focus on the family nucleus, which is assumed to be protective factors in adversity such as illness, unemployment or financial difficulties." (Fernandes, 2012, p.323).

For the interviewees, the situation of poverty was the reason that led them to seek help from social institutions, namely insufficient financial resources, a reason that is related to the failure to fulfil basic human needs such as food or clothing. The interviewees also pointed to situations of indebtedness and requests for social housing as reasons for seeking out social institutions. In addition, one of the interviewees (E2) mentioned support in legalising their documentation and E3 early pregnancy.

When asked about the changes they felt after resorting to social support institutions, people who experience poverty say they haven't experienced any kind of change. They mention that the support they receive from the institution is, in fact, an important way of meeting their monthly expenses, but it doesn't lead to structural changes in their lives so that they can overcome the condition/cycle of poverty.

The perspective of ways to combat poverty, on the part of the people who experience it, centres on solidarity and equitable distribution of resources among those living in poverty, greater involvement by the state, the appropriate use of resources in creative and productive ways, the promotion of equal opportunities and the valorisation of the family and family cohesion in the fight against poverty also featured prominently in the interviewees' discourse.

Based on the interviewees' future expectations, they want to achieve independence from care services, have sufficient financial resources to live without worries and prioritise their children's education. In addition, there is a desire for better housing conditions and reintegration into the labour market.

Despite these expectations, we must emphasise that all the interviewees showed a sense of discouragement at the lack of prospects.

Faced with the question "What does being poor mean to you?" The interviewees considered that:

"[...] Being poor means being in a situation of inability to survive [...]" (E1). E1 considers that nowadays there is more support for people in situations of poverty: "[...] I think that the poor today have more horizons than in the past and I think that explains everything [...] and in the past they didn't have that possibility." This interviewee states that the face of poverty is "[...] the mercy of circumstances". It also mentions that incomes do not keep up with the increase in the prices of rent, and food, among others, and that policies are highly insufficient to combat the current situation. "The poor in the past perhaps had more survival skills than those of today also because today people have a different level of choice of demands, they mainly complain about what they didn't build".

For E2, "[...] poverty in the world is hunger and injustice [...]". For this interviewee, one of the ways to combat poverty is through solidarity, help and the sharing of resources among people who live in precarious situations: "[...] if you have many sheets of paper and just give me one, I will make more sheets of paper with the one you gave me [...]".

E3 states that poverty only has to do with financial issues. "[...] we are poor, but we are happy. With the little we have; we learn to manage and we learn to be happy that way. [...]" Throughout the conversation, there is a resignation on the part of this interviewee to her situation of poverty, which has lasted as long as she can remember.

E4 states that "[...] I don't know, I think it's the lack of work, people want to work and there is a lack of opportunity. [...] I think that people want to work to change their lives, if they don't spend their entire lives receiving social insertion income, they shouldn't look at colour, race, or ethnicity [...]".

It was possible to verify that for all interviewees, poverty is a lack of resources. This lack of resources associated with the increase in the cost of living is mentioned by E1. E2 associates the lack of resources with hunger and injustice. E4 focuses on the problem of the lack of work with the consequent lack of income. It is worth highlighting E3's response, which despite mentioning that poverty is the lack of resources, goes on to say that being poor means "being happy", highlighting that she is content with little and that little makes her happy,



demonstrating resignation to her state. of poverty, which can be explained by having already been born into a poor family and community.

## CONCLUSION

The perception of the interviewed subjects about their situation of poverty and being poor focuses on the material dimension. This situation can be explained by the lack of difficulties in meeting their (and their family's) basic needs. Concern about this level of survival can lead them to focus on this material aspect.

Despite this, one of the interviewees talks about injustice, making the connection between poverty and the structural conditions existing in society that lead to poverty. Another interviewee highlights one of the most visible manifestations of poverty: disconnection from the job market. When this rupture occurs in this important structuring element of people's lives, the immediate consequence is the loss of income. However, this loss represents only the beginning of several deprivations, including emotional aspects, such as impacts on interpersonal relationships, self-esteem, and social isolation.

The concept of poverty has a direct relationship with the concept of deprivation. Poor people are those who are faced with a situation of deprivation, in which a lack of resources is at stake. The definition of deprivation refers to the non-satisfaction of basic human needs. This is perhaps the most apparent aspect of deprivation and poverty itself. Generally, it is a deprivation in several areas of basic needs: food, clothing, housing, transportation, communication, working conditions, opportunities for choice, health and medical care, education, vocational training, culture, participation in social life and politics, among others. In other words, deprivation is characterized by a lack in multiple domains that encompass the essential needs for a dignified life, affecting various aspects of well-being and participation in society (Bruto da Costa et al, 2008).

However, to resolve a situation of poverty, it is not enough to resolve deprivation. This means that, in addition to resolving the situation of deprivation, it is necessary for the poor to also become self-sufficient in terms of resources. It should be noted that except for one interviewee, all others consider that the fight against poverty must be carried out with support and social policy measures of a more individualized nature. When you experience the situation of poverty in the first person, it is understandable that the response you seek is appropriate to your condition. However, we know that it is essential that responses to combating poverty are multidimensional, do not focus solely on the economic aspect, or people, but seek to alter and change factors and structural conditioning that lead to situations of poverty and create the conditions to persist in it.

This relationship with structural and social reproduction factors is visible in the life stories of the interviewees. Three of them were born into a family already in poverty and, for this reason, there were few or no opportunities they had

throughout their lives. This situation leads them to find themselves in a disadvantageous situation, for example in the job market, which allows the cycle of poverty to repeat and perpetuate. As Bruto da Costa (2018) states, "If we want to tackle the problem as a whole, we must not only have actions aimed at people, just for people, leaving the entire environment lacking infrastructure at all levels, economic, cultural and social".

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# **BURNOUT SYNDROME IN HELPING PROFESSIONS WORKING WITH PEOPLE WITH VISUAL IMPAIRMENT**

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## **ABSTRACT**

The main aim of the present study was to investigate the prevalence of burnout syndrome in helping professions working with people with visual impairment. The research has a quantitative design, the standardized Maslach Burnout Inventory (MBI) questionnaire was used. 126 respondents representing the helping professions, namely social workers, social work assistants and psychologists who work with people with visual impairment, participated in the survey. The data collected was analysed through the Statistica statistical analysis, which found moderate burnout in form of emotional exhaustion, low levels of depersonalisation, and high levels of job satisfaction. All males in the research sample showed a high degree of emotional exhaustion.

**Keywords:** *Burnout Syndrome. Helping professions. Visual impairment. Social work. Prevention*

## **INTRODUCTION**

The issue of burnout syndrome is an increasingly frequent topic in various discussions in our society, which stems from the fact that burnout affects not only health, performance at work, but also has an economic impact on the life of a person affected by burnout. The first to introduce the term burnout syndrome was Freudenberg in his work *Burnout: The Cost of High Achievement* in 1974.

In January 2022, the WHO included burnout syndrome as a diagnosis in the International Classification of Mental Disorders (ICD-11). According to the WHO, the symptoms of burnout syndrome include: exhaustion, lack of energy, distancing from work, negative feelings or even cynicism related to employment, as well as reduced productivity at work [1].

Pioneers of burnout syndrome research have expressed the view that burnout should not be seen as an individual problem but as a societal problem [2].

The causes of burnout are directly related to frustration, our unmet expectations and needs, negative interpersonal relationships, emotional strain, as well as specific workplace conditions, which include excessive level of

responsibility, control, unreasonable demands, unreasonable expectations, as well as problems in communication, with authority, and faulty work organisation [3].

The process of burnout has the following phases [4]:



**Fig. 1.** *Phases of the burnout process*

*Source: Bullová, 2022, the authors*

The issue of burnout syndrome is most often associated with the performance of demanding and burdensome professions. Helping professions working with people with visual impairment can clearly be included in this category. Work activities with this group of people is often connected with many burdensome and stressful factors, most often related to responsibility, planning, meeting required goals and daily contact with people with visual impairment.

Social workers draw on a broad range of theories, knowledge, research and skills to ensure comprehensive and holistic analysis of the client's situation. Social workers' assessments range from targeted and brief specific-needs analyses through to comprehensive psychosocial and risk assessments of the full range of social and psychological needs, strengths and stressors. These assessments underpin needs-based interventions that address the social and emotional issues that are impacting on the individual and family members' health and wellbeing.

The scope of practice in health social work includes:

- Therapeutic intervention in relation to a range of chronic health conditions including: mental health, trauma, adjustment to diagnosis and disability.
- Family intervention and support, which includes family therapy and family case conferencing.
- Leadership in case management and in the coordination of services both within and external to the health care service.
- Group work: working with groups and communities to provide health information and education on a wide range of biopsychosocial factors that impact on wellbeing.
- Advocacy in relation to health inequalities to improve health outcomes for individuals, families, groups and populations in relation to social issues that may affect the health outcome.
- Psychoeducation for patients and their families in a range of health care settings.
- Crisis intervention, which can include psychosocial services [5].

- The health care social worker focuses on psychological prevention, diagnosis, therapy, counseling, and issues professional judgments in clinical practice to examine mental life in terms of health and illness. In the Czech Republic, the position of Health and Social Worker is anchored by legislation, in Norway there is the so-called Vernepleier, who focuses on the autonomy and quality of life of the client in his/her everyday environment, the target groups are primarily people with disabilities, psychological disorders, addictions, and in the USA it is the Clinical Social Worker - Clinical Social Worker. In Slovakia, we have been trying for years to legislate for social work in health care in the context of a holistic approach to the patient/client, which would greatly facilitate the situation in health care, without success so far.

The WHO has reported that there are more than 3 billion people with damage to eyesight worldwide, of which 285 million are visually impaired, 39 million of whom are blind. As a result of the population explosion, ever-evolving technology and the associated rapid change in lifestyles, it is predicted that by 2050, one in two people will be visually impaired [1]. Because of their disability, people with visual impairment need ongoing help and support to develop their skills and abilities. Their integration into mainstream society is based on education aimed at developing practical independence. In addition to the family, social services can play an important role, as they have various ways of helping people with visual impairment. The main provider of social services in Slovakia for people with visual impairment is the civic association The Slovak Blind and Partially Sighted Union [6]. Within the framework of specialised social counselling, they help not only the visually impaired, but also their social environment. The Slovak Blind Union worked with up to 5,170 people with visual impairment throughout 2021. Several types of social services were provided to these clients.

*Table 1. Social services provided in 2021*

| Type of service                | Number of clients | Number of acts | Hours         |
|--------------------------------|-------------------|----------------|---------------|
| Basic social counselling       | 70                | 70             | 86            |
| Specialised social counselling | 4,810             | 13,655         | 13,934        |
| Social rehabilitation          | 1,744             | 6,860          | 11,287        |
| Guide and pre-reading service  | 44                | 71             | 126           |
| Lending of aids                | 27                | 40             | 51            |
| Training in the use of aids    | 4                 | 73             | 288           |
| <b>Overall summary</b>         | <b>5,170</b>      | <b>20,769</b>  | <b>25,772</b> |

*Source: Union of the Blind and Partially Sighted of Slovakia*

Due to the gradually evolving and long-term nature of the syndrome, a small number of people seek help in the early stages (stagnation, frustration). When treating burnout, it is essential to start as early as possible [4]. The most widespread treatment methods are therapies, but also psychological and psychiatric treatment.

## **METHODS**

The main aim of the research is to determine, through quantitative analysis, the prevalence of burnout syndrome in the helping professions working with people with visual impairment in relation to the length of experience. We set 3 hypotheses (see Results).

### **Sample**

The purposive sample consisted of a total of 126 (100.00%) respondents working in the helping professions with persons with visual impairment, of which 112 (88.89%) were female and 14 (11.11%) were male. There were 88 (69.84%) social workers, 24 (19.05%) social work assistants and 14 (11.11%) psychologists. In terms of length of experience, 66 (52.38%) respondents with less than 9 years of experience participated. 38 (30.16%) respondents had between 10 and 15 years of experience. The remaining 22 (17.46%) respondents had 16 or more years of experience. The average length of experience of the respondents was 10 years.

### **Methods of data collection and analysis**

As the main research tool, we chose the standardized Maslach Burnout Inventory (MBI) questionnaire, which is considered the most widely used diagnostic tool for monitoring burnout syndrome in exposed professions [7]. Symptoms of burnout fall into three areas: Emotional exhaustion, depersonalisation and personal satisfaction.

To evaluate the hypotheses, we used the nonparametric Kruskal-Wallis H-test (at the  $\alpha=0.05$  level), which is used to compare the medians or rank averages of two or more independent groups. It answers the question of whether the difference in rank averages is statistically significant ( $p < 0.05$ ) or merely random ( $p \geq 0.05$ ).

## RESULTS

**Table 2.** Degree of emotional exhaustion of respondents

| Degree of emotional exhaustion | Females    |              | Males     |              | Total      |               |
|--------------------------------|------------|--------------|-----------|--------------|------------|---------------|
|                                | p.         | %            | p.        | %            | p.         | %             |
| Low                            | 42         | 33.33        | 0         | 0.00         | 42         | 33.33         |
| Moderate                       | 42         | 33.33        | 0         | 0.00         | 42         | 33.33         |
| High=burnout                   | 28         | 22.22        | 14        | 11.11        | 42         | 33.33         |
| <b>Total</b>                   | <b>112</b> | <b>88.89</b> | <b>14</b> | <b>11.11</b> | <b>126</b> | <b>100.00</b> |

*Source: the authors*

A rather interesting finding was that only female respondents showed low and moderate levels of emotional exhaustion. A high degree of emotional exhaustion (burnout syndrome) was reached by 42 (33.33%) of the respondents, of which all 14 (11.11%) were male respondents. Based on the above, we can say that one third of the respondents suffer from high emotional exhaustion and are thus not resistant to burnout syndrome.

**Table 3.** Degree of depersonalisation of respondents

| Degree of depersonalisation | Females    |              | Males     |              | Total      |               |
|-----------------------------|------------|--------------|-----------|--------------|------------|---------------|
|                             | p.         | %            | p.        | %            | p.         | %             |
| Low                         | 80         | 63.49        | 0         | 0.00         | 80         | 63.49         |
| Moderate                    | 18         | 14.29        | 2         | 1.59         | 20         | 15.87         |
| High=burnout                | 14         | 11.11        | 12        | 9.52         | 26         | 20.63         |
| <b>Total</b>                | <b>112</b> | <b>88.89</b> | <b>14</b> | <b>11.11</b> | <b>126</b> | <b>100.00</b> |

*Source: the authors*

80 (63.49%) of the respondents scored low in depersonalisation. Again, these were only female respondents. A moderate degree of depersonalisation was achieved by 20 (15.87%) respondents. A high degree of depersonalisation was achieved by 26 (20.63%) respondents. 12 (9.52%) of them were male respondents. On the positive side, we see that more than half of the respondents were found to have low levels of depersonalisation.

**Table 4.** Level of personal job satisfaction of respondents

| Degree of personal satisfaction | Females    |              | Males     |              | Total      |               |
|---------------------------------|------------|--------------|-----------|--------------|------------|---------------|
|                                 | p.         | %            | p.        | %            | p.         | %             |
| High                            | 70         | 55.56        | 2         | 1.59         | 72         | 57.14         |
| Moderate                        | 38         | 30.16        | 10        | 7.94         | 48         | 38.10         |
| Low=burnout                     | 4          | 3.17         | 2         | 1.59         | 6          | 4.76          |
| <b>Total</b>                    | <b>112</b> | <b>88.89</b> | <b>14</b> | <b>11.11</b> | <b>126</b> | <b>100.00</b> |

*Source: the authors*

Based on the above, we believe that more than half of the respondents worked in a relatively harmonious environment with a greater sense of meaningfulness.

**Statistical evaluation of hypotheses**

*H1: We hypothesize that in the helping professions working with people with visual impairment, there is a statistically significant difference in the emotional exhaustion subscale associated with length of experience, with workers with up to 9 years of experience being at higher risk.*

**Table 5.** Multiple comparison of the results of the non-parametric Kruskal-Wallis H-test for hypothesis 1

|   |   |                          |                               |
|---|---|--------------------------|-------------------------------|
| Depend:<br>Degree of emotional exhaustion | Multiple Comparisons p values; Degree of emotional exhaustion<br>Independent (grouping) variable: Length of experience<br>Kruskal-Wallis test: H (2, N=126)=8.76254<br>p=0.0125 |                          |                               |
|   | up to 9 years<br>R: 62.227  | 10-15 years<br>R: 74.553 | 16 years or more<br>R: 48.227 |
| up to 9 years                             |   | 0.253557                 | 0.2303                        |
| 10-15 years                               | 0.253557  |                          | 0.0099                        |
| 16 years or more                          | 0.230349  | 0.009928                 |                               |

Source: the authors

Legend: N - number, H - test statistic, p - level of statistical significance.

The results of the non-parametric Kruskal-Wallis H-test showed the existence of significant differences between the groups of workers (H=8.768; p=0.0125 < 0.05). A more detailed analysis based on multiple comparisons of p-values concluded that there are highly significant differences in the level of emotional exhaustion between the group of workers with 10-15 years of experience (M=25.8; corresponding to a moderate degree of emotional exhaustion) and the group of the most senior workers (M=15.7; indicating only a low degree of exhaustion; p=0.0099 < 0.01). Based on the above test and the statistical results found, we can conclude that hypothesis 1 has been only partially confirmed.

*H2: We hypothesise that there is a statistically significant difference in depersonalisation in the helping professions working with people with visual impairment in relation to length of experience, with workers with a length of experience between 10 and 15 years showing higher levels of depersonalisation.*



**Table 6.** Multiple comparison of the results of the nonparametric Kruskal-Wallis H-test for hypothesis 2

| Depend:<br>Level of<br>depersonalisation | Multiple Comparisons p values; Level of<br>depersonalisation Independent (grouping) variable:<br>Length of experience<br>Kruskal-Wallis test: H (2, N=126)=13.03679 p=0.0015 |                          |                               |
|--|--|--------------------------|-------------------------------|
|  | up to 9 years<br>R: 61.348   | 10-15 years<br>R: 74.079 | 16 years or more<br>R: 51.682 |
| up to 9 years                            |  | 0.303212                 | 0.031851                      |
| 10-15 years                              | 0.303212   |                          | 0.000976                      |
| 16 years or more                         | 0.031851   | 0.000976                 |                               |

Source: the authors

Legend: N - number, H - test statistic, p - level of statistical significance.

In the case of depersonalisation as a factor of burnout syndrome, we observed highly significant differences between groups of workers with different lengths of experience ( $H=13.037$ ;  $p=0.0015 < 0.01$ ). Multiple p-value comparison tests showed the existence of the following differences between the group of the most senior workers with at least 16 years of experience and the two remaining groups - workers with at least 16 years of experience vs. workers with 10-15 years of experience  $p=0.000976 < 0.001$ ; workers with at least 16 years of experience vs. workers with up to 9 years of experience  $p=0.03185 < 0.05$ . The depersonalisation rate for the most senior group was relatively low. For the remaining two groups, the result corresponds to a moderate degree of depersonalisation. Based on the above test and the statistical results found, we can conclude that hypothesis 5 has been only partially confirmed.

*H3: We hypothesise that in the helping professions working with people with visual impairments, there is a statistically significant difference in personal satisfaction associated with length of experience, with workers with 16 or more years of experience being more likely to have higher levels of personal satisfaction than colleagues with shorter experience. .*

**Table 7.** Multiple comparisons of the results of the nonparametric Kruskal-Wallis H-test for hypothesis 3

| Depend:<br>Degree of<br>personal<br>satisfaction | Multiple Comparisons p values; Degree of personal<br>satisfaction Independent (grouping) variable: Length of<br>experience<br>Kruskal-Wallis test: H (2, N=126)=13.27174 p=0.0013 |                          |                               |
|--|---|--------------------------|-------------------------------|
|  | up to 9 years<br>R: 66.409  | 10-15 years<br>R: 67.763 | 16 years or more<br>R: 47.409 |
| up to 9 years                                    |   | 1.000000                 | 0.000967                      |
| 10-15 years                                      | 1.000000  |                          | 0.012860                      |
| 16 years or more                                 | 0.000967  | 0.012860                 |                               |

*Source: the authors*

Legend: N - number, H - test statistic, p - level of statistical significance.

The results of the non-parametric Kruskal-Wallis H-test showed the largest significant differences between the different groups of workers ( $H=13.272$ ;  $p=0.0013 < 0.01$ ). Statistically highly significant differences are between the group of the most senior and the most junior workers ( $p=0.000967 < 0.001$ ). Significant differences were also confirmed between the group of the most senior workers and the group of workers with 10 to 15 years of experience ( $p=0.01286 < 0.05$ ). Based on the above test and the statistical results found, we can conclude that hypothesis 3 has been confirmed.

## DISCUSSION

Many experts and researchers consider working in the helping professions to be a high-risk occupation in terms of work and emotional stress and burnout syndrome. Within service-oriented professions, workers in helping professions may experience higher levels of stress and burnout than workers in comparable professions. This is due to the fact that workers in the helping professions, including social workers, are expected to have a positive outlook, a high level of empathy and to be constantly helpful, even when faced with difficult situations. Due to the service-oriented nature of social work and mental and physical health care, the needs of workers in helping professions are usually overlooked [8].

Emotional exhaustion in the work environment arises in a system of interconnected employee-client-environment interactions. The main factors indicated are tension, conflict situations in the workplace, high demands on workers, excessive workload, lack of stability and clarity at work, and lack of inter-agency cooperation [9].

The authors found by regression analysis that emotional exhaustion was correlated with high workload and high levels of general stress. Also high

workload and pace were common reasons for workers leaving the helping professions [10].

Our findings confirm that the riskiest area for workers in the helping professions with people with visual impairment is that of emotional exhaustion. Our predictors of burnout syndrome were gender (males were more prone to develop burnout syndrome) and length of experience. The results of a study done by another researcher differ from our results. He found that male workers were up to 31.00% less likely to develop burnout syndrome ( $0.005 < 0.05$ ), indicating that in the given research men were more resilient to developing burnout syndrome [11].

A significant predictor influencing overall burnout was length of experience. Higher levels of emotional exhaustion were reported by workers with 10 to 15 years of experience compared to those with longer experience. The existence of significant differences in depersonalisation was demonstrated between the group of the most senior workers with at least 16 years of experience and the two remaining groups. This means that workers with more than 16 years of experience showed the highest degree of depersonalisation and were most at risk of developing burnout syndrome. Also, the highest level of personal satisfaction was shown for workers with more than 16 years of experience.

According to Takeda et al. [12], novice social workers are more at risk of burnout syndrome than more experienced workers. They cite the shock of reality during the first year of practice and leaving the job after overcoming burnout as the reason.

Further research [10] confirmed a higher risk of burnout syndrome in workers with 15-19 years of experience ( $p < 0.001$ ). Thus, the length of experience of workers appears to be a significant predictor of emotional exhaustion. We believe that the above findings are related to the long-term practice of the helping profession, which may appear stereotypical over time. An equally significant negative factor can be the ever-increasing demands that create increasing pressure on workers. One of these requirements is long working hours, which are directly proportional to the length of experience of the workers. Their research found that a 40-hour work week doubled the likelihood of burnout syndrome in the area of emotional exhaustion. In the case of the 60-hour workweek, the rate of burnout syndrome even tripled [13].

Several studies cite the age of the social worker as a factor influencing the development of burnout syndrome and report higher rates of burnout in younger workers than in more experienced or older workers [14].

The final and strongest predictor found was the helping workers' practice in the area of emotional exhaustion and depersonalisation. The most senior helping workers exhibited higher levels of emotional exhaustion as well as higher levels

of depersonalisation. Practice has also been considered a strong predictor of burnout syndrome by several researchers and practitioners mentioned in our paper.

Prevention should have a prominent place in the field of burnout; however, the opposite is true - it is often underestimated and neglected. Supervision is an effective means of preventing the onset of burnout syndrome, as it is able to recognize the early stages of the disease, thus creating more room for its treatment [15].

Other authors point out that low levels of personal satisfaction lead to reduced performance, which results in job dissatisfaction. Poor self-assessment scores are evident too, which are related to loss of enthusiasm, reduced productivity and lack of adaptability. A decline in personal satisfaction creates a feeling of helplessness and induces a cumbersome performance of work tasks that can lead to burnout syndrome [16].

## **CONCLUSION**

Our study yielded interesting and valuable findings for practice. It pointed out predictors that may significantly influence the rate of burnout syndrome in helping professions working with people with visual impairment. The ever-increasing demands placed on the helping professions can place significant work and physical demands and emotional strain on workers, which over time leads to burnout syndrome, as several studies have confirmed. As a result, helping professions are considered high-risk occupation. It is therefore important to emphasise and not overlook the mental and physical health needs of helping workers. There are a number of preventive measures to avoid burnout, an essential element being raising awareness about burnout and the options to address it. The most effective preventive methods include physical activity, outdoor exercise, music, as well as keeping in touch with friends and colleagues or supervision. In preventing burnout, it is important to respect your needs, to recognise the first signs and to be able to say “enough”. Change is possible if we can change our attitude towards ourselves, set priorities and internal boundaries. We think it is appropriate that attention continues to be paid to the prevention of burnout syndrome.

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# COOPERATION OF PROFESSIONAL FOSTER PARENTS WITH THE CHILD'S BIOLOGICAL FAMILY

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## ABSTRACT

In this paper we present partial results of the research entitled “The use of selected elements of the systems approach in the context of professional families”. The aim of our project was to analyse the functioning of selected elements of the family system of professional foster families from the perspective of professional foster parents, their life partners, their biological children and children placed in professional foster families. We compiled a questionnaire, the results of which were processed by quantitative analysis. The online questionnaire was designed for professional foster parents, their life partners, their biological children and children placed in professional foster families. The questionnaire referred to children aged 12 years and older.

We present the results of research on the cooperation between professional foster parents and biological parents of children placed in professional foster families. In our research, we were interested in whether professional foster parents communicate with biological parents about their children, how often they cooperate with them, whether they involve the child's extended biological family in the cooperation, and whether professional foster parents cooperate with their life partners and biological children when solving the child's problems. The online questionnaire was designed for professional foster parents, their life partners, their biological children and children placed in professional foster families. The questionnaire referred to children aged 12 years and older. The results of the research present the current state of the art and may provide an impetus for changes in supporting the relationships of children in professional foster families with their biological parents.

**Keywords:** *professional foster family, child, biological family*

## INTRODUCTION

In the Slovak Republic, professional foster care is a form of institutional care, which is carried out by professional foster parents “in the home environment of the professional foster parent in a family house or in an apartment provided by the Centre for Children and Families (hereinafter referred to as “the Centre”) or in a family house or in an apartment of which the professional foster parent is the owner, co-owner, tenant or joint tenant, which the professional foster parent has the right to use on the basis of a loan agreement or to which the professional foster

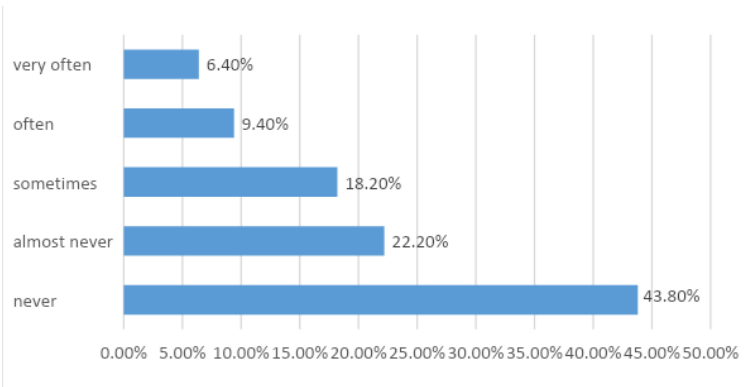
parent has the right of personal use.” [1] (Act No. 376/2022 Coll., Art. 1, § 2a) According to §52 of Act No. 305/2005 Coll., the professional foster parent is “obliged to promote contact between the child's parent, the person who is personally taking care of the child, another person close to the child or the applicant for foster family care and the child placed in the professional foster family and, in cooperation with other professional employees of the Centre, to prepare the child for establishing a personal relationship between the child placed in the professional foster family and the applicant for foster family care.” [2] In our research, we were interested in the experience of professional foster parents from the Centres for Children and Families in the Slovak Republic in working with biological families of children.

## RESULTS

The research sample consisted of 203 respondents working as professional foster parents. The mean age of respondents was 48.43 years ( $SD=9.02$ ), they had an average of 2 biological children ( $SD=1.38$ ), and by the time of the research they had practised professional foster parenting for an average of 7.47 years ( $SD=5.31$ ), they had had an average of approximately 7 children placed ( $SD=6.76$ ).

They were mostly women ( $n=183$ , 90.1%), with a secondary school diploma (called “maturita” in the Slovak Republic) ( $n=147$ , 72.4%), living with their life partner/spouse ( $n=155$ ; 76.4%) in a rural area ( $n=139$ , 68.5%), while their life partner/spouse did not usually carry out professional foster parenting with them (83.7%).

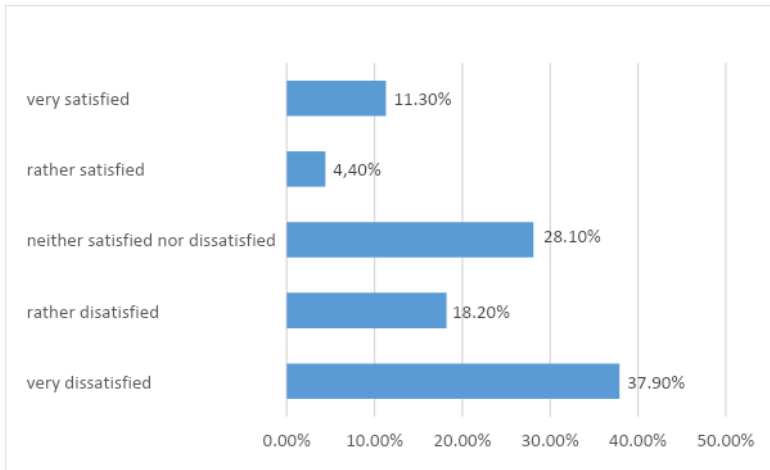
**Fig. 1.** *How often do you communicate with the biological parents of children placed in the professional foster family?*



When asked how often professional foster parents communicate with the children's biological parents, 66% of respondents answered never or almost never and only 15.8% answered often or very often.

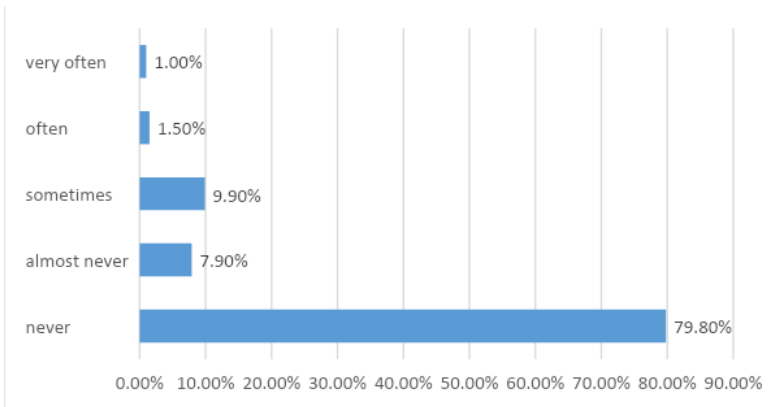


**Fig. 2.** *How satisfied are you with the communication with the biological parents of children placed in the professional foster family?*



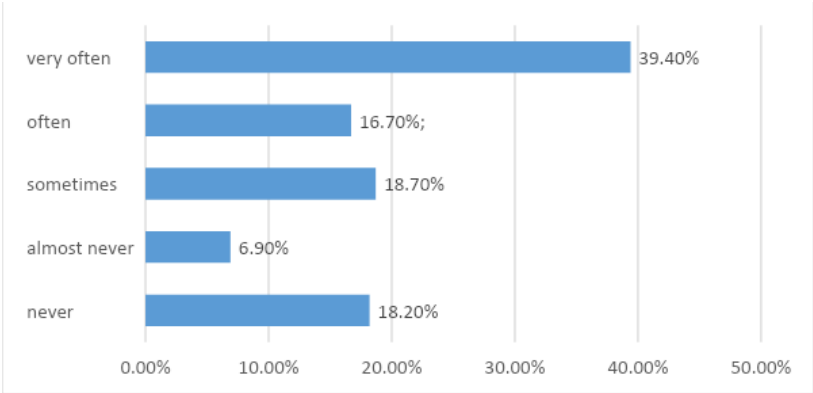
The results showed that 56.1% of the professional foster parents in the sample were not satisfied with the communication with the biological parents of the children placed in the PFF (rather dissatisfied and dissatisfied). 15% percent of respondents indicated that they were satisfied or rather satisfied and 28.1% gave a neutral response, i.e., neither satisfied nor dissatisfied.

**Fig. 3.** *When trying to solve the child's problems, you cooperate with: the biological parents*



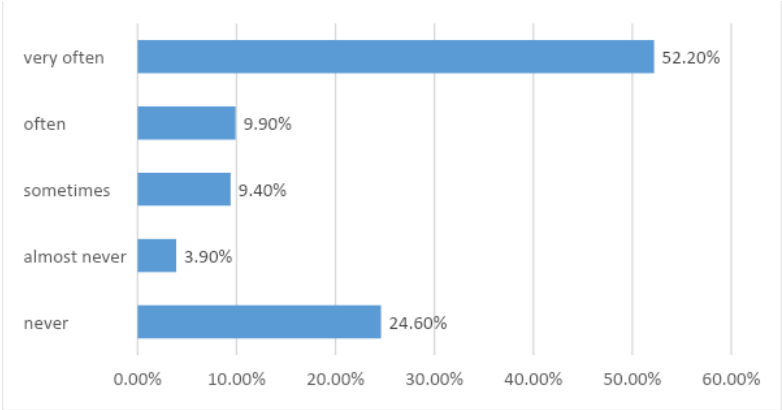
87.7% of the professional foster parents in our sample reported that they never or almost never cooperated with the biological parents in solving the problems of the child placed in the PFF, and only 2.5% of the respondents cooperated with the parents very often or often. 9.9% of respondents gave the answer sometimes.

**Fig. 4.** *When trying to solve the child's problems, you cooperate with: the whole family*



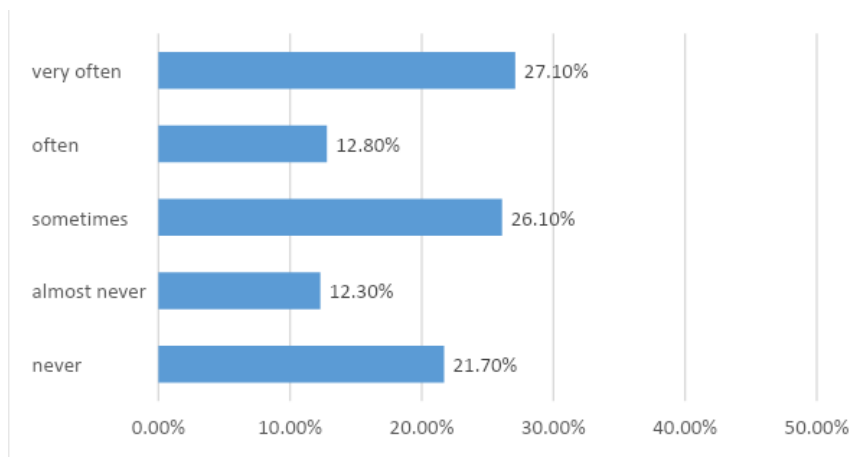
The results showed that the majority - 56.1% of the professional foster parents in our research sample work with the whole family very often or often when solving problems with a child placed in the PFF, 18.7% gave the answer sometimes, and 25.1% almost never or never involve the whole family in solving problems.

**Fig. 5.** *When trying to solve the child's problems, you cooperate with: the life partner*



The majority - 62.1% of professional foster parents cooperate with their life partners very often or often, 9.4% sometimes and 28.5% never or almost never involve their life partners in solving problems with the child placed in the PFF.

**Fig. 6.** *When trying to solve the child's problems, you cooperate with: biological children*



The majority of professional foster parents - 60.1% never, almost never or only sometimes involve their biological children in solving problems of children placed in the PFF and 39.9% involve their children in solving problems very often or often.

## DISCUSSION

The results of the research showed that 66% of the respondents - professional parents - never or almost never communicated with the child's biological parents. More support for professional foster parents in communicating with biological parents from the Centres for Children and Families could help to change this situation. The initial disinterest of the biological parents in communicating with the professional foster parents could be overcome by supported interest of the professional foster parents in the biological parents, a non-judgmental approach and an effort not to cut off the child's contact with his/her biological family. The main reasons why it is important to support children's contact with their biological parents include improving the relational bond with their parents, understanding the reasons for their removal from the family (appropriate to the child's age and intellectual maturity), and treating the losses experienced by the children in their families. The issue of relational bond is discussed in detail by Hašto (p. 90), who states that "a prerequisite for healthy child development is a "secure bond" in which the child knows that in stressful and anxiety-provoking situations he or she can rely on the parent's emotional and active support and reassurance." [3] "The relational bond is most telling of the interaction between mother and child in early life. The relational bond is a strong bond that is formed between the mother (the caregiver) and the baby right after birth. We are not born with a relational bond; it needs to be developed over time through a loving and caring relationship. In the typical case, the caregiver is the mother; thus the mother becomes the relational

person to whom the relational bond is directed. The child reacts positively to the mother, feels comfortable and safe in her presence. The relational bond therefore provides not only love, but also security, safety and support, especially in situations that cause the child stress, fear and tension. Thus, the mother is considered a security base for the child. The lack of interaction between mother and child has pathological consequences on the child's development, which are especially dangerous if this lack of interaction between them is deep and long. The relational bond theory of the child's attachment to the mother assumes that this relationship forms the basic pillar for all subsequent social relationships. Breaking an already established bond causes anxiety in a child at an early age and, in certain circumstances, can have serious consequences for his or her future development. [4]

Other research results showed that 56.1% of the professional foster parents in the sample were not satisfied with the communication with the biological parents of children placed in a professional foster family (rather dissatisfied and dissatisfied). 87.7% of the professional foster parents in our sample reported that they never or almost never cooperate with the biological parents in resolving the problems of a child placed with a professional foster family.

However, the results showed that the majority 56.1% of the professional foster parents in our research sample work with the child's entire family very often or often when solving problems with a child placed in the professional foster family, 18.7% gave the answer sometimes, and 25.1% almost never or never involve the entire family in solving problems. The so-called family circle meetings can be used to support children's contact with their biological family. It is a meeting of members of the biological family, both near and distant, during which they themselves can suggest a way of dealing with a serious life situation. "The family circle meetings are organised in Slovakia by the Society of Friends of Children from Children's Homes Úsmev ako dar, an important non-governmental organisation working with dysfunctional families and children in foster care. The family circle meeting takes place in the presence of a coordinator who guides the family, allows the members to connect and cooperate in order to create a suitable environment for the child, motivates the family to cooperate and cohere in order to find ways and possibilities to eliminate the problem. One of the most important signs is taking responsibility for the future direction of the family, planning steps and implementing them. The advantages of the family circle meeting include the presence of the child, who actively participates in the planning and implementation of steps towards family rehabilitation. [5] Every man has a need to belong somewhere and this is what drives the implementation of the family circle meeting. [6] A family circle meeting lasts approximately two to three hours. The length of the meeting depends on the topic and the problem being addressed. Every family circle meeting is preceded by preparation. This includes the coordinator's communication with the relatives and with professionals with whom he or she attends meetings to prepare for the family meeting." [7]

The results of the research reflect the use of the professional foster parents' own family support in solving problems with a child placed in the professional foster family. 62.1% of respondents (professional foster parents) work with their life partner very often or often when solving problems with a child placed in the professional foster family, and 39.9% involve their children very often or often. We consider these results to be very positive, as seeking support in one's own family is also a sign of well-functioning relationships and a vital need to seek support and encouragement within the family circle. [8]

## CONCLUSIONS

Based on the results of our research, we conclude that there is a need to support professional foster parents in promoting children's contact with their biological parents. It is necessary to expand the counselling and professional service in ensuring contact between children and their families, to intensify direct work with the biological parents of children by social workers and psychologists from Centres for Children and Families. Support for children's relationships with their parents is necessary in terms of psychological treatment of the children's losses, supporting parents to adjust their relationships with their children and creating a chance for the biological parents to change their life situation. It is important to note that professional foster parenting is intended to be a temporary form of care until the biological parents are able to care for their children again. In cases where it will not be possible to return the child to his/her biological family, the professional foster family should provide the child with a sense of acceptance and security. It is a fact that the majority of children placed in professional foster families go into foster care (most often adoption and foster care). In all cases, however, it is necessary to help the child to nurture the relationship with the biological parents, and this can be significantly helped by the cooperation of professional foster parents with the children's biological parents.

## ACKNOWLEDGEMENTS

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# COOPERATION OF PROFESSIONAL FOSTER PARENTS IN SOLVING THE CHILD'S PROBLEMS WITH PROFESSIONAL WORKERS

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## ABSTRACT

This paper focuses on professional foster parents who provide care for children removed from their family environment by court order. The practice of professional foster care entails a number of challenging situations that professional foster parents are often unable to cope with on their own. To support professional foster parents in managing such situations, a team of professional workers has been set up. The aim of the research was to find out whether professional foster parents cooperate with professional workers in solving the problems of a child placed in the professional foster family and also how they perceive the usefulness of a social worker. The research sample consisted of 203 respondents practising professional foster parenting, which represents almost one third of all professional parents in the Slovak Republic. The results showed that professional foster parents most often cooperate with social workers and a psychologists in solving the child's problems, and less often with other professional workers. Respondents also identified areas in which they found social workers useful.

**Keywords:** *professional workers, professional foster parents, social worker*

## INTRODUCTION

The professional foster family is an organisational part of the Centres for Children and Families. In a professional foster family, the care of the children is provided by spouses employed by the Centre for Children and Families or by an individual employed by the Centre for Children and Families [1]. The goal of professional foster parenting is not to establish a long-term relationship with the child, but to return the child to his or her biological family or to place the child in foster care, such as foster care and adoption [2]. Several studies conducted in the Slovak Republic have confirmed the importance of professional foster care and its significance for the healthy development of the child placed in the professional foster family [3]. Children placed in professional foster families have often experienced maltreatment, substance abuse by parents and poverty in their biological families [4]. Research shows that children in foster care have two to three times higher rates of developmental, emotional, and behavioural problems than other children [5]. An important role for professional foster parents is played

by the professional team of workers of the Centres for Children and Families, which is usually made up of social workers, psychologists and special pedagogues. Their role is to provide help and support to professional foster families.

Our aim was to find out whether professional foster parents cooperate with professional workers in solving the problems of the child placed in the professional foster family and also how they perceive the usefulness of a social worker.

## **METHODS**

The research sample consisted of 203 professional foster parents. The mean age of respondents was 48.43 years ( $SD=9.02$ ), they had an average of 2 biological children ( $SD=1.38$ ), and by the time of the research they had practised professional foster parenting for an average of 7.47 years ( $SD=5.31$ ) and had had an average of approximately 7 children placed ( $SD=6.76$ ). They were mostly women ( $n=183$ , 90.1%), with a secondary school diploma (called “maturita” in the Slovak Republic) ( $n=147$ , 72.4%), living with their life partner/spouse ( $n=155$ ; 76.4%) in a rural area ( $n=139$ , 68.5%), while their life partner/spouse did not usually carry out the professional foster parenting with them (83.7%).

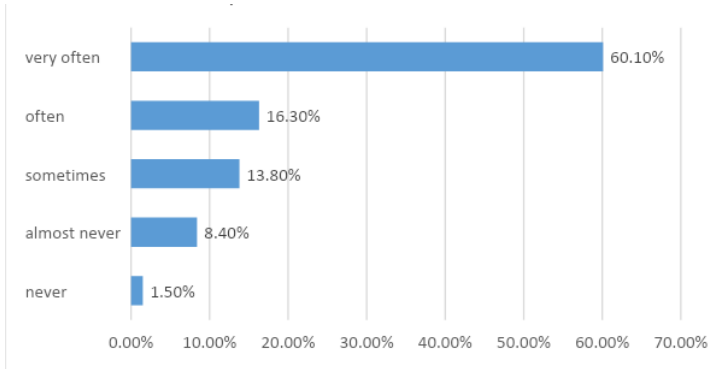
To identify cooperation between professional foster parents and professional workers, we used a self-elaborated questionnaire. In addition to sociodemographic variables, the questionnaire included items that focused on the frequency of cooperation with professional workers and one open-ended question that explored how professional foster parents perceived the usefulness of a social worker in their cooperation.

The SPSS 21 software was used for statistical data processing. In the statistical analysis, we used the description of sociodemographic variables through basic measures: arithmetic mean, median, mode, standard deviation, minimum, maximum and relative frequencies (percentages). Content analysis of the data was used for the last open-ended question.



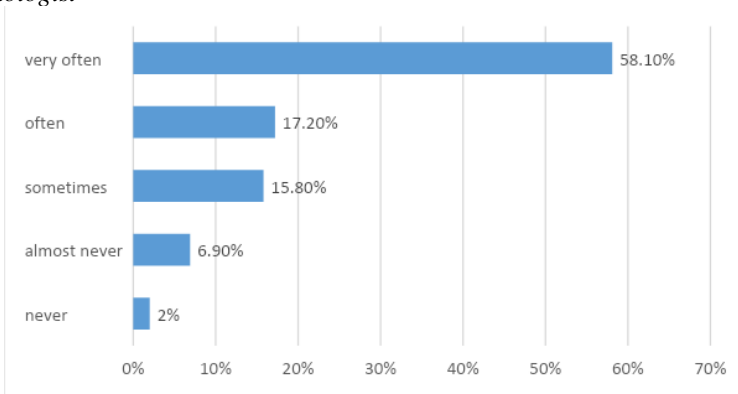
## RESULTS

**Fig. 1.** *When trying to solve the child's problems, you cooperate with: a social worker*



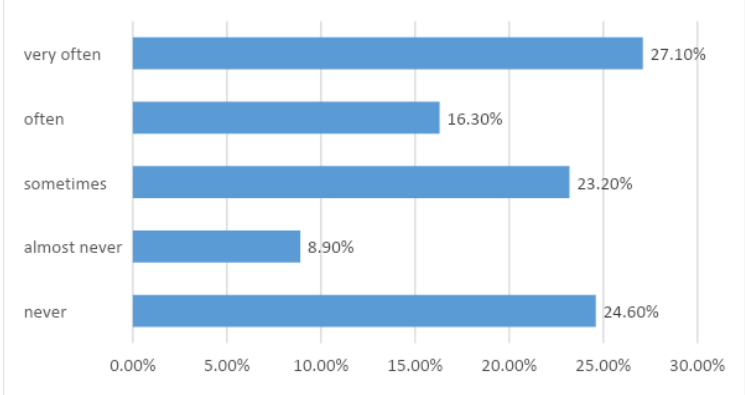
Up to 76.4% of respondents stated that they cooperate with a social worker when trying to solve problems of a child placed in the professional foster family, 13.8% stated occasional cooperation and 9.9% of respondents never or almost never cooperate with a social worker.

**Fig. 2.** *When trying to solve the child's problems, you cooperate with: a psychologist*



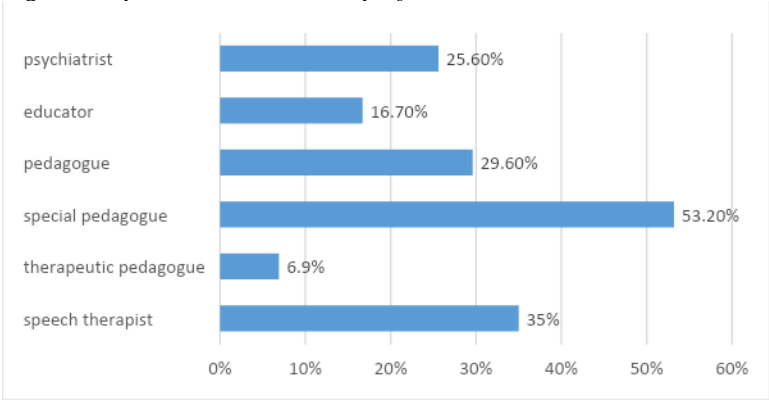
75.3% of respondents reported that they cooperate with a psychologist very often or often when solving problems of a child placed in the professional foster family, 15.8% reported occasional cooperation, and 8.9% of professional foster parents never or almost never cooperate with a psychologist.

**Fig. 3.** *When trying to solve the child's problems, you cooperate with: another professional*



The results showed that 43.4% of professional foster parents cooperated with another professional very often or often, 23.2% reported occasional cooperation, and 33.5% almost never or never cooperated with another professional.

**Fig. 4.** *Cooperation with another professional*



A closer look at cooperation with another professional showed that the most common professionals were a special pedagogue (53.2%), a speech therapist (35%), an pedagogue (29.6%), and a psychiatrist (25.6%). Cooperation with an educator (16.7%) and a therapeutic pedagogue (6.9%) was less frequently sought.

**Table 1.** *The usefulness of a social worker in cooperation from the perspective of professional foster parents*

| <b>CATEGORY</b>  | <b>NUMBER</b> | <b>%</b> |
|--|---------------|----------|
| Provides assistance in solving problems, difficulties  | 45            | 17%      |
| Provides organisational assistance   | 40            | 15%      |
| Provides advice  | 38            | 14%      |
| Provides information   | 36            | 13%      |
| Ensures contact with the biological family of the child placed in the professional foster family | 29            | 11%      |
| Provides emotional help and support  | 29            | 11%      |
| Can help with anything and is always available   | 16            | 6%       |
| Provides assistance with paperwork, administrative assistance                                    | 10            | 4%       |
| Is useful because of experience  | 7             | 2.6%     |
| Provides assistance in dealing with all situations regarding children                            | 6             | 2%       |
| Handles the necessary things   | 5             | 2%       |
| I don't know   | 4             | 1%       |
| Is not useful  | 3             | 1%       |
| Updates family circumstances   | 1             | 0.4%     |
|  | 269           |          |

Professional foster parents answered the question: “In your opinion, what makes a social worker useful in working with your professional foster family?” The responses of professional foster parents were categorized. A total of 45 professional foster parents (17%) reported that the usefulness of a social worker lies in providing assistance in solving problems and difficulties. The second most frequent answer given by professional foster parents was providing organisational support (n=40, 15%). This was followed by the answers that a social worker provides counselling (n=38, 14%), provides information (n=36, 13%), provides contact with the biological family of the child placed in the professional foster family (n=29, 11%), provides emotional help and support (n=29, 11%), helps with anything and is always available (n=16, 6%), provides help with paperwork, assistance with administration (n=10, 4%), is helpful because of experience (n=7, 2.6%), provides help with all situations regarding children (n=6, 2%), and handles necessary things (n=5, 2%). The answer “I don't know” was given by 4 professional foster parents (1%) and the answer “Is not helpful” was given by 3 professional foster parents (1%). The answer “Updates family circumstances” was given by 1 professional foster parent (0.4%).

## DISCUSSION

The results of the research show that more than three quarters of professional foster parents cooperate with a social worker as well as with a psychologist in solving problems with the child. We see this finding as positive, as social workers

and psychologists form a professional team dedicated to professional foster families in the Centres for Children and Families. The provision of social, psychological and employment counselling is a normal part of the organisational provision of professional parenting. The results of the research conducted in 2017 also show that professional parents are in regular contact with the professional staff of the Centres for Children and Families, who communicate not only with the professional foster parents, but also with the children in their care [6].

Despite the high number of cooperating professional foster parents reported above, almost 10% of professional foster parents said that they almost never or never cooperate with social workers and psychologists. This may be related to the fact that some professional foster families prefer to rely on their own strengths to solve problems, feeling that they can handle the situation on their own, which can be risky in certain circumstances.

Regarding cooperation with other professionals, almost half of the professional foster parents cooperate with other professionals as well, mostly with special pedagogues, speech therapists, pedagogues and psychiatrists. These results only confirm that children placed in professional foster families often suffer from various difficulties that stem from the natural family environment. The disturbance or trauma in the child receiving care is sometimes severe and requires visits to a child psychiatrist [7]. Hyperactivity, learning difficulties and violent behaviour can lead to increased tension in professional foster families [8]. Such behaviour can even lead to termination of foster care [9]. For this reason, we see it as positive that professional foster parents cooperate to a large extent with other professionals who can help them in coping with the often-difficult situations of raising and caring for children in professional foster families.

Regarding the usefulness of social workers, professional foster parents most frequently stated that they help with difficulties, provide organisational support and social counselling. Professional foster parents are provided with social counselling in the form of basic and specialised social counselling [10]. Within the framework of social counselling, professional foster parents are provided with services in solving the problems of the entrusted children, visits in the environment of professional foster families, interviews and contact with members of the professional foster family take place. Professional parents are advised by social workers on how they should proceed in dealing with problems [11].

Another identified area in which professional foster parents find the social worker useful is providing contact with the biological family of a child placed in the professional foster family. The social worker plays the role of coordinator in the restoration and formation of the relationship between the biological parent and the child in the professional foster family; he also arranges dates and places of meetings [12]. Children placed in professional foster families do not lose contact with their biological family, they meet regularly, sometimes the children stay in the biological family for a longer period of time [13]. The provision of emotional

support by the social worker is another factor identified. It is important for professional foster parents to be able to talk about their difficulties with a social worker, to have someone who will listen to them, understand and support them and who shows interest.

In future research, it would be interesting to find out how professional workers evaluate cooperation with professional foster families.

## CONCLUSION

The results of our research show that the vast majority of professional foster parents often cooperate with social workers and psychologists in solving the child's problems, which can be seen as a positive phenomenon. Our research also confirmed that professional foster parents cooperate mostly with special pedagogues, speech therapists, pedagogues and psychiatrists. This is due to the fact that children placed in professional foster families often suffer from behavioural disorders, attention disorders and psychological problems stemming from the original family environment in which they were neglected by their parents. The results of the research showed that professional foster parents perceived the usefulness of social workers in many areas, especially in the areas of assistance and counselling, providing contact with the biological family and emotional support. Our research has yielded interesting results that can be further processed in future research. It is desirable that attention continues to be paid to the issue of cooperation between professional foster parents and professional workers.

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# FROM XENOPHOBIA TO PHILOXENIA: A JUMP FOR HUMANITY

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## ABSTRACT

*Xenophobia* is a strong feeling of dislike or fear of people from other countries [1] and not only that but also the fear of people that are different from our reality. *Philoxenia* (=hospitality) is the willingness, the friendly disposition to welcome and above all to provide free shelter, food, and care to one or more persons during their temporary stay in a foreign home [2]. The term of *philoxenia* is ancient Greek and it means the love (φιλό=ἀγαπῶ) for the *xenos* (=stranger). The term of *philoxenia* used by holy fathers in Christianity to speak about the embrace of the other, unconditionally. Saint John the Chrysostom spoke about the importance of hospitality and gave the paradigm to be followed by the believers for a better society. Christ himself lived as a hunted, as an immigrant, And as a refugee. As a baby, Jesus was persecuted by Herod [3]. The Godman, an unfamiliar, a foreign person, stepped into the world to save it from its destructive self, to demolish every certainty it had built in order to show it a different, transformative and soteriological path [4]. Fazal Sheikh (1965) is an American photographer who engaged in documentary photography by focusing on refugees and the socially marginalized people. His portraits find the face of the other when suffering. He tries to capture the glance of the foreign face and create a social comment, a social statement for the refugees that could possibly awaken the masses around the world (Afghanistan, India, Africa, South America, Middle East, Southwest United States and Mexico). This paper examines the two terms of *xenophobia* and *philoxenia* from the field of Orthodox theology and more specific from dogmatic theology and aesthetics. Aesthetics is understood as that creative way that expresses doctrine without altering or mitigating it. The methodology that is followed is the comparative study of patristic and biblical sources and the Fazal Sheikh's photography and theoretical work as a dialogue that can depict the gap of the two terms and the overpass of it to the great jump for humanity, because "humanity remains on the move" [5].

**Keywords:** *foreigner, Christianity, hospitality, photography, portrait*

## INTRODUCTION

The Nobel awarded Greek poet Odysseus Elytis wrote "Make jump faster than wear" [6]. This poetic verse means that man should try to make the difference, to change the habits. The jump is not easy. It is a risk and a challenge, to move forward and to move faster undressing yourself from all your personal certainties in life. This humanitarian jump is different. It has the burden of the

human life in its existential way. And it is not that simple. If it was, everybody would try it. In contemporary world is not easy to raise your voice. It might even be dangerous. How could xenophobia be overpassed? How could man change his glance towards humanity?

Photography is an existential way to maintain and reproduce mechanically the infinity only once [7]. Photograph carries a piece of history, a piece of time, human emotions. It is a trace and evidence of existence in time. A separate moment of immortality. Documentary photography is formed by the technology and aesthetics of each historical period [8]. Documentary characteristics of photography are the ones that can form and reshape the public opinion and awaken the masses. A very representative example of documentary photography is the one that did not only record the Great Depression (1929–1939) in the United States but also shaped the world's consciousness. The *Farm Security Administration* photo project with Roy Stryker as head hired photographers to depict the bad living conditions of the farmers that were suffering by the economic crisis [9]. It was not all about recording but an attempt to move the public opinion and depict the farmer's reality suffering.

The science of theology can interpret, explain, or comment the terms of photography and, in this case, Fazal Sheik's documentary photography. In dogmatic theology and aesthetics, we can find similarities of common terms and "common pictures" with photography: *xenos*, foreigner, stranger, neighbor, other. This paper aims to enlighten both theology and photography through a common ground which is the unfamiliar human face by the Fazal Sheik's photography portrait to overpass it. Two ways we to overpass xenophobia and find a new ground, the common ground of *filoxenia* or *philoxenia* as it is more widely known.

## **XENOPHOBIA: A TIMELESS PICTURE**

Xenophobia is a compound word. It comes from the terms *xenos* (=stranger) and *phobia* (=fear). It is not defined when the word of xenophobia was born. In ancient Greece *xenos* did not only have the meaning of stranger and foreigner but had also the meaning of the guest. This presupposes the existence of some other man who would be the host. The host should had been followed all the social rules of hospitality. So, at ancient Greece the term of *xenos* did not have as negative meaning as it has during the years ahead. Hospitality rules were closely connected to god's will. This is a fact that many ancient Greek writers (Plato, Homer, Socrates, Sophocles, Aeschylus, Euripides, Aristotle) can confirm. This law of hospitality is fundamental in Christianity and Christian writers too. As George Makari concluded in his thorough research, the term of xenophobia does not appear in any of these writers. The paradox here is the fact that although that there is no such a term in Greek or Christian writers, the term is only implied. As Makari ended up in his research, the term *xenophobia* firstly appeared on March 13, 1909, by an Italian correspondent archaeologist and cartographer, Rodolfo Lanciani, in his report in *The Athenaeum*. Lanciani used this word to describe the denial of the



discovery of a Semitic temple in the center of Rome. This discovery started from a scientific hypothesis by a French archaeologist, Paul Frédéric Gauckler but it rejected by Germans and Italians experts [10].

In Old Testament we can find passages that are mentioned the term of *xenos*. In the book of *Exodus*, we can find the ancient Greek term *proslitos* which means the man who changed his religion and his religious beliefs. This word is interpreted with the word *stranger*:

“You shall not oppress a stranger, since you yourselves know the feelings of a stranger, for you also were strangers in the land of Egypt.” (Ex. 23:9)

The stranger is linked with the man in need according to the Old Testament verse. In the book of *Leviticus*, we find the same term:

“When a stranger resides with you in your land, you shall not do him wrong. The stranger who resides with you shall be to you as the native among you, and you shall love him as yourself, for you were aliens in the land of Egypt; I am the Lord your God.” (Lev. 19:33-34)

Many are the biblical verses that are referred to the term of stranger. What we observe is the fact that this term of stranger is linked with God’s mercy and love. The same value of the love to *xenos* is followed and is verified in New Testament too. The ancient Greek term *plesion* which means the man near, the neighbor has close meaning to the term stranger. Jesus gave the paradigm:

“You shall love your neighbor as yourself.” (Mt. 19:19)

We should not forget the fact that when Jesus Christ was born, he was chased by Herod. Herod was afraid of the newborn that was said to be the messiah. He was afraid of losing his power and domination by Jesus. So, Herod tried to find the newborn Jesus to kill him but without success. Christ had to face the xenophobia of his time for his mortal nature but also the xenophobia for his immortal nature too. Jesus’ environment was not safe from his day born. Let us not forget the Pharisees and scribes that were also Godman’s enemies. They were blindly following Biblical laws. Pharisees and scribes were also afraid of Jesus’ interaction with the people and His public speeches that could influence them. They could feel His eloquent and powerful speech to the public. Jesus was a new human model that showed a different way for man to find God. He opposed to Pharisees and scribes and to anything fake and hypocritical. And this is the reason why they crucified Him: Jesus was a menace.

## CAPTURING PHILOXENIA

The answer in the existential question of xenophobia is the philoxenia. The Greek word philoxenia is the hospitality, the embrace of *xenos*. John the

Chrysostom in his discourse *On almsgiving and hospitality* underlines that almsgiving does not only concern the rich people but also the poor, it is an ability that everybody can develop and a paradigm that everybody can follow because it is a matter of human willingness. By doing charities and help your neighbor you come closer to God's will and closer to salvation [11].

We can find this term of philoxenia in the New Testament:

“Do not forget to show hospitality to strangers, for by so doing some people have shown hospitality to angels without knowing it”. (Heb. 13:2)

Philoxenia can be an outcome of *theoxenia*. John Chrysostom in the same discourse refers to Abraham's philoxenia which proved to be a theoxenia. Abraham hosted three angels that were the triune God [12]. In the book *Human Archipelago* (2018) we can find the same idea of theoxenia by Teju Cole's note next to Fazal Sheikh's photo. According to the note of the photo:

“Theoxenia is hospitality (xenia) towards the humble stranger (xenos) who turns out to be a god (theos). The concept is later ritualized.” (*Human Archipelago*, p.168)



**Fig. 1.** Fazal Sheikh, *Tupasi's bedroom*, government women's ashram, Vrindavan, India 2005

Fazal Sheikh captured the result of hospitality in a place that women in Vrindavan found their shelter. Indian widows move to the holy city of Vrindavan to devote the rest of their lives in praying to the god Krishna inside the temple, now awaiting only death. It is their only “good option” of living while by staying at their hometown they risk getting hurt, getting married by force, raped, or even be killed. The holy city offers the chance for peace and redemption for the Indian women. The unfamiliar face of the other, the woman face of xenos meets every woman in suffer. The humble meets the holy. And all this mystery becomes a sacrifice, a fact that is proved by the sacred offerings we see in the picture. Faith is captured on a wall of a safe place for the humble women. This offerings on the wall represent the result of philoxenia, a philoxenia that has its roots in theoxenia.



**Fig. 2.** *Fazal Sheikh, Ruin and surround lands of the Palestinian village of Beit Jibrin, Hebron district, Israel 2013*

According to the *Human Archipelago*, hospitality should arise as a result of the human duty. The sense of hospitality to the stranger in someone’s home means that he comes closer with a different reality, the reality that the stranger had to face, the reality of the war, the reality of the brutality, and the reality of the genocide [13]. The sense of home and hospitality is transformed in this picture. A ruin carries all the deeper meanings and all the realities that are still exist. The ruin carries the idea of the home and the idea of the ideal home. A home that has space for the man in need, for the xenos. Fazal Sheikh’s photo combines the deeper meanings of the hospitality. Between the ruins we can see that the door and the windows are missing. We see a ruin with open door and open windows. Maybe this openness is what exactly human need to be hospitable. This openness

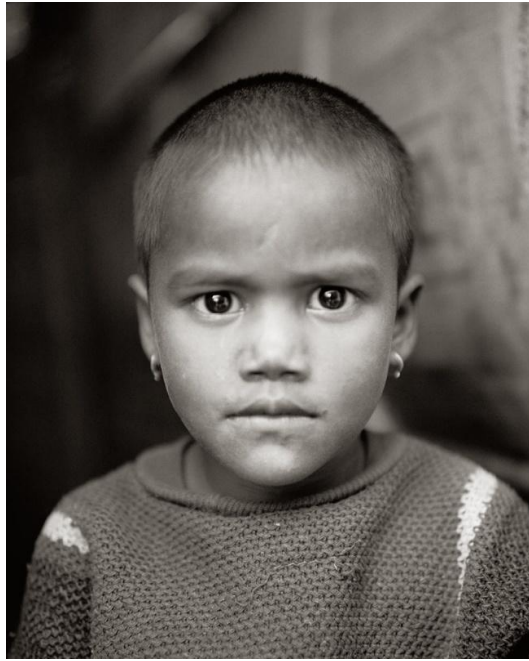
is an element that is close to Christian thought. At the same time this photograph of the ruin is a call to aesthetics. New perspectives that are build when the ruin has its own dynamics and speech to the humans and nature within time and history [14]. It is an aesthetical redefinition but also an existential redefinition of what this home used to be and of what carries through time and what means today.

## **THE FLASH OF HUMANITY**

Two different ways to perceive the essence of xenophobia and its opposite term which is the philoxenia. Dogmatic theology gives us the theoretical background to realize xenophobia's roots and dynamics through time. Theological aesthetics as a branch of dogmatic theology gives us the opportunity to go further and find new ways, aesthetical ways that can speak of the matters that theologians try to describe theoretically. Photography has the power of the image, has the power to speak without words and descriptions. Photography is art but also a testimony of truth. Documentary photography gives pieces of reality and awakens the masses. It is not only about capturing a moment, but it is also a matter of awakening. Fazal Sheikh's photography work can affirm that.

Photography is not only an aesthetical depiction, but also an experience. An experience of change and an experience of a metamorphosis. This experience and this transformation give a new perception of life. A new perception and a new dimension of the world by the glance of the photographer. It is an aesthetical experience because we develop our "aisthiseis", our senses to feel the world with our personal way. Senses are the ones that a photographer transforms with his camera, as pieces of life within life: the attraction, the motion, the emotion, the fear, the enthusiasm [15].

According to theology, transformation is an approach to the divine by grace, in history and in creation. Man experiences a renewal and a new existential way of living. Photography can also transform the things we know. It is the unique eye of the photographer that makes this transformation happen. In both cases there is a common factor: the belief. In theology, transformation presupposes the belief in God. In photography, transformation presupposes the belief in life and humanity. In Fazal Sheikh's photos we can see this flash of light for transformation. Fazal Sheikh captures humanity through his human portraits, the unfamiliar faces of the people in margin. He focuses on their gazes, and he gives them space to exist. The photographer makes a humanistic statement to change the people's consciousness and furthermore, he makes a photographic effort to move the masses and react to the injustice and pain of the socially weak, of the displaced people.



*Fig. 3. Fazal Sheikh, Annu, Jai Hind squatter settlement, Delhi, India 2008*

## CONCLUSIONS

From the day we born we try to learn how to walk. But what about jumping? How are we going to learn how to leave our certainties and take the risks for the things that worth? A jump was never easy because there is always the risk of falling. The jump here in this research case is to take aside all the prejudices that are deeply rooted in human thoughts. Xenophobia is a timeless term that will not ever disappear if we do not change our glance to the other and our glance to diversity. Xenos is a word and a reality that is related to the margin, the displaced. In ancient times writers described this phenomenon of xenophobia, the same Christianity also did. But surprisingly officially the term of xenophobia appears as it seems in 1909.

Philoxenia comes to change the unhospitable behavior. Philoxenia is a life proposal and a life attitude. Theoxenia looks like the first step us to get closer to philoxenia. When someone recognizes God in stranger's face, he will get closer to God as well. Jesus Christ spoke about philoxenia and taught to his disciples the importance of this action by His paradigm. According to theology, on the face of the stranger we should recognize Jesus. According to Fazal Sheikh's photography, on the face of the stranger we should recognize the common human nature, but also the face of God. Both in Orthodox theology and Fazal Sheikh's photography the hospitality is human's duty, and both embrace the idea of the transformation

from an aesthetical, awakening path. This does not mean that this paper is an attempt to identify theology with Fazal Sheikh's photography work. This paper is a dialogue between Orthodox theology and documentary photography that aims to highlight the terms of xenophobia and philoxenia for the everyday human to find back his lost values, to find back himself, to find back his hidden humanity. Theology and photography can be the tools.



*Fig. 4. Fazal Sheikh, Rodi with roses, streets of Delhi, India, 2005*

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# IMPLEMENTATION OF NEW TECHNOLOGIES WITH ELEMENTS AND TOOLS OF ARTIFICIAL INTELLIGENCE INTO THE TELEVISION BROADCASTING

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## ABSTRACT

Creating media content in television requires technologies that are specific to this field, and in the current era of newsroom convergence, they are interconnected with the online digital space. The evolution of television technology is very dynamic and today is no longer just about cameras, microphones, lights, and related television technology, but is primarily about hardware and software. The aim of the paper is to highlight the evolution of television technology, which is very dynamic, incorporating elements and tools of artificial intelligence (AI), which also affects some workflows. The paper reflects on the implementation of new technologies in the broadcast of the Slovak private television ta3, their benefits for the recipients, but also for the creators of media content. Television ta3 changed its headquarters and built new studios in new premises. It offers viewers projection on a modern studio LED wall, which is one of the largest in the Czech and Slovak television market. At the same time, it is complemented by a modern high-resolution digital resolution. The production system includes leading technology with AI elements, which has increased the flexibility of television broadcasting.

**Keywords:** *artificial intelligence, broadcasting, television content, ta3, television*

## INTRODUCTION

Artificial intelligence (AI) is the development of computer systems that can perform tasks requiring human intelligence. These tasks include speech recognition, problem solving, learning and decision making. Artificial intelligence technology has made significant advances in recent years, empowering various industries and changing the way tasks are performed. [1] Artificial intelligence (AI) is a new technical science that simulates and extends the theories, methods, technologies, and application systems of human intelligence. [2] In recent years, we have witnessed the emergence of innovative technologies such as artificial intelligence that is reshaping various industries including television broadcasting. The successful implementation of AI in



broadcasting can be seen, for example, in the streaming service *Netflix*, which effectively uses AI algorithms to analyse viewers' behaviour and preferences, allowing it to recommend personalised content to individual subscribers. [3] This has contributed significantly to the success and popularity of the platform. Similarly, YouTube has also leveraged AI technologies to optimise video recommendations and improve user engagement.

## **THE USE OF ARTIFICIAL INTELLIGENCE IN BROADCASTING**

The implementation of AI technologies into TV broadcasting brings several potential benefits. First, AI can increase the efficiency of content production and distribution in broadcasting. AI-powered tools can automate various aspects of content creation, such as video editing, captioning and graphics generation. [4] This can significantly reduce the time and effort required for post-production work, allowing broadcasters to deliver high-quality content faster and more efficiently. In addition, AI can help optimise content scheduling and distribution by analysing audience preferences and behaviour. For example, AI algorithms can identify the best time slots and channels to target specific demographics, ensuring that content reaches the right audience at the right time. Second, AI can revolutionise the advertising industry within broadcast TV. By analysing data and consumer behaviour, AI can generate targeted ads that are tailored to individual preferences. This personalized approach to advertising increases the likelihood of capturing viewers' attention and generating higher click-through rates. Additionally, AI can help advertisers optimize campaign strategies by providing valuable insights into audience engagement and response. Also, AI can help broadcasters understand consumer insights and preferences through advanced technologies such as speech recognition and natural language processing. [5] This enables broadcasters to create more engaging and relevant content that resonates with their target audience. The implementation of AI technologies in TV broadcasting has the potential to significantly improve marketing and advertising strategies.

Another area is audience analytics and viewer engagement. By leveraging AI technologies, broadcasters can gain detailed insights into recipients' preferences and behaviours. This information can be used to create personalized recommendations and suggestions, leading to a more engaging and interactive viewing experience and increased viewership. AI can also help in recommending and editing content. AI algorithms can suggest relevant content that is aligned with their interests and preferences based on the analysis of the recipient's data. This not only improves the user experience but also helps broadcasters retain and attract more viewers. [6]

Another area where AI can have a significant impact is in content creation and production. AI tools and techniques can streamline the content creation process by automating certain tasks such as video editing and post-production.

This saves broadcasters time and resources, allowing them to produce high-quality content more efficiently. In addition, AI can assist in real-time content creation by analysing current events and trends to produce relevant and timely news or segments. AI can significantly improve the accessibility of television broadcasts for individuals with disabilities. By leveraging AI technologies, broadcasters can implement features such as closed captioning and audio description to meet the needs of viewers with hearing or visual impairments.

By leveraging AI technologies, broadcasters can improve the accuracy and efficiency of weather forecasts and provide viewers with timely and reliable information. AI technologies can streamline the content production process by automating tasks such as video editing, audio enhancement and colour correction.

One trend emerging at the intersection of AI and journalism is automated content creation. With the help of AI-powered algorithms, news organizations can now create articles, summaries, and even video reports on breaking events in real time. This automation simplifies the content creation process and allows news organizations to provide timely and relevant information to their audiences.

For example, in the United States, news television networks such as *CNN* and *NBC* have integrated AI elements into their news broadcasts. They use AI-powered algorithms to generate real-time news, analyse datasets and identify patterns to provide accurate and timely information to their viewers. Another example is the use of AI-powered virtual news feeds. These virtual news anchors are computer-generated characters that deliver the news in a realistic manner. [7] They are equipped with natural language processing capabilities and can simulate human-like gestures and expressions. China's state-run *Xinhua News Agency* has unveiled an AI-powered virtual news anchor in China that can deliver news in both Chinese and English. These advances in AI technology have revolutionized the way news television delivers information to its audience. [8] For example, news TV networks in the UK, such as the *BBC* and *Sky News*, use AI algorithms to analyse viewer data and provide tailored news recommendations to their audiences. These personalised news recommendations are tailored to the interests and preferences of each individual viewer, improving their overall news viewing experience.

## ARTIFICIAL INTELLIGENCE AND TA3 TELEVISION

As the integration of AI elements into *ta3* television continues to evolve, it is important to consider the future implications of this technology. One possible future development is the increased use of AI-powered chatbots in *ta3*. These chatbots would be able to interact with viewers, answer questions and provide information in real time. In addition, advances in natural language processing could lead to the development of AI-powered translation tools that allow news TV networks to provide real-time translations of news programmes in different languages, reaching global audiences without language barriers.

Another potential future development is the use of AI in fact-checking and verification processes. AI-powered fact-checking tools can analyse the accuracy and credibility of information presented in TV broadcasting. They can quickly detect misinformation or false claims, helping to preserve the integrity of news coverage. AI can automatically flag suspicious or potentially false information in news content, helping viewers distinguish between reliable and unreliable sources.

It can be concluded that the use of AI elements in news television is becoming more and more widespread. This technology allows not only the personalisation of news content, but also the automation of content creation. AI elements have the potential to enhance the overall news viewing experience for viewers and improve the efficiency of news production and dissemination. As news television networks around the world embrace AI elements, the impact on journalistic practices and news production is transformative. As news organizations strive to keep up with the evolving media landscape, elements of artificial intelligence are being used to automate content creation.

*Ta3* television is a private news television station that began broadcasting in 2001. At that time, it had already come to market with revolutionary technologies, as it was the first television station in Europe to use tapeless technology in the processing of media content. It had its own A3news editorial system, which was later replaced by the world-famous Octopus integrated with Avid media central cloud UX. This system is used for example by *Czech Television*, *CNN Prima NEWS*, *Sky News*, *Al Jazeera*. It allows remote online access to import and manage media content for broadcast, while also being able to distribute the created audiovisual content to social media and OTT platforms.

*Ta3* television implemented AI elements into its broadcast systems back in the summer of 2017 during the transition to HD broadcasting. The AI implementation was mainly pursued to simplify and automate the descriptive metadata of archived video content. The system enables automatic recognition of faces with a timestamp of their occurrence in the archived video.

Another module is automatic scene recognition "scene detection" which helps to automatically detect the type of news video content such as football, hockey, mountains, parliament, motorcycle, car, etc. Scene detection module helps to automatically categorize the video archive and create "labels" (tags), which make it easier for the editor to navigate through the video archive.

*Ta3* is currently in the process of implementing a speech to text system that uses machine learning to transcribe the spoken word into text form. The transcription of spoken word to text can be done in real time/online and in the archive. Text to speech allows to read prepared texts in a digital voice with the possibility of using live audio dubbing, live commentary through a speaker, voiceover for the blind, etc. Translate speech translates the spoken word from one

language into multiple languages. It runs in real time, using automatic detection and transcription of the spoken language. It can translate 10 languages simultaneously. This system also uses computer vision, identifies people, objects and can summarize what is in each picture.

## CONCLUSION

Integrating AI elements in news television has the potential to revolutionise journalism AI technologies can assist in various aspects of news production and dissemination, including content creation, news gathering, personalisation, storytelling, audience engagement and fact-checking. [9] These technologies can help journalists gather and analyse information from multiple sources, improve personalization of news delivery, enhance storytelling through immersive experiences, and ensure accuracy and quality of reporting. While there are ethical concerns about the use of AI in news television, such as the potential for biased content and the loss of human jobs, the benefits, and potential advances that AI brings to news television are significant. The use of AI can increase the efficiency and effectiveness of news production, allowing journalists to focus on more analytical and investigative tasks. [10] In addition, AI can improve the user experience by providing personalized news recommendations and delivering content in innovative formats such as virtual reality and augmented reality. AI can play a key role in combating the spread of fake news by verifying facts and validating information before disseminating it to the public. Overall, the integration of AI elements in news television has the potential to transform the field of journalism by improving efficiency, accuracy, and user experience. The use of AI elements in news television has brought about significant transformations in the field of journalism. [11]

AI technologies have revolutionized the production and dissemination of news and influenced various aspects of the industry. [12] Advances in AI have led to the automation of news writing, increasing efficiency, and reducing human labour. News organizations are now able to generate articles, summaries, and even video reports on breaking news events in real time using AI-powered algorithms. These algorithms can analyse large amounts of data, extract relevant information, and present it in a format that is easily accessible to audiences.

In addition to automated content creation, AI has revolutionized other aspects of news production and dissemination. For example, AI-powered algorithms can analyse social media trends and user behaviour to tailor message delivery and recommendations. This tailoring of message delivery ensures that audiences receive content that is relevant to their interests, increasing engagement and satisfaction.

One area for further study of AI in broadcast media could be the ethical implications of using AI technologies in journalism. Ethical considerations arise when AI is used to create news content, particularly in areas such as comment

moderation and news writing. [13] There is a concern that AI-generated content may lack the human judgement and ethical considerations that journalists bring to their work. At the same time, there is potential for bias in AI-generated news content, as algorithms may inadvertently amplify existing biases present in the datasets used for training.

Another area for further study could be the impact of AI on newsroom dynamics and journalists' roles. As AI technologies automate various tasks in news production, it is important to explore how this affects the roles and responsibilities of journalists. [14] In addition, the potential displacement of human journalists needs to be considered as AI becomes more advanced and capable of performing complex tasks. Overall, the use of AI elements in news television around the world has significantly changed the way news is generated, delivered, and consumed. The integration of AI technologies into news television has revolutionised the field, enabling automated content creation, personalised news delivery and innovative storytelling methods. This transformation has both positive and negative implications, highlighting the need for further study on the ethical implications of AI in journalism and its impact on newsroom dynamics and the role of journalists. As AI continues to advance and integrate into news television, it is important to assess its impact on the ethics of journalism. [15]

AI technologies have already demonstrated their potential to revolutionise the production and dissemination of news in newsrooms around the world. Intelligent templates generated by AI allow journalists to easily gather and disseminate news on a variety of issues. These advances in AI have led to radical transformations in the field of journalism, enabling increased efficiency and productivity.

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# MINIMUM SOCIAL POLICY IN PORTUGAL: A READING BASED ON MICHEL FOUCAULT

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## ABSTRACT

This paper reflects on the relationship between Michel Foucault's analysis of power and Portugal's social minimum policy (social insertion income- RSI) and the role of professionals who work with it. This paper presents a theoretical analysis of the correlation between Michel Foucault's power analysis and the policy of social minimums, specifically the social insertion income program in Portugal, and the responsibilities of professionals working in this field. Based on the author's conception of power, as well as the technologies of power, the aim is to reflect on the RSI as a regulatory technology, and biopolitics that states incorporate to guarantee well-being through reproduction and social regulation.

**Keywords:** *Portugal's social minimum policy, power analysis, Michel Foucault, normalising power, social intervention*

## INTRODUCTION

This essay aims to present a reflection based on a Foucauldian reading of social intervention in the application of the social insertion income (RSI) measure. The aim is not to analyse or evaluate the effectiveness of the right to the RSI but rather to understand the power inherent in the social intervention developed within the scope of this social policy. The basis for this reflection is Michel Foucault's analysis of power since it is a conception of power that breaks with traditional analyses of power. It is considered that the RSI policy allows the poorest citizens access to a benefit, but at the same time, it presents itself as a strategy of the normalising society to apply and enforce normalising power. When carrying out their duties, the professionals who operate social policies must reflect on the implicit objectives of normalisation involved in the social policies and measures they implement and on the power they wield, which gives them legitimacy to represent the state and apply the pre-established norm.

## BRIEF NOTES ON POWER IN MICHEL FOUCAULT

In his analysis of power, Foucault presents a series of ruptures with traditional conceptions of power. The author's first challenge is to abandon the question "What is power?" to focus on analysing and determining its mechanisms, effects and devices and their relationships at different levels, fields and extensions. To this end, Foucault (1999) [1] starts from the consideration that "Power is not given, nor exchanged, nor taken back, but it is exercised and only exists in act

(...); power is not primarily the maintenance and conduction of economic relations but in itself primarily a relation of force" (p.21). This is a break with the traditional view of power based on the juridical model, which sought to explain the genesis of the state and considered power to be an original right that is ceded and legitimised through the law. The perspective of power as an action that was fundamentally based on and expressed in its negative aspects and discourse of prohibition is another idea that Foucault abandons. As the author points out, from the classical jurists to the present day, power is presented as essentially negative and based on the existence of a figure whose role was to prohibit and a subject who had to, in some way, obey that prohibition. This idea of a single figure as an instance of power results in the consideration of the existence of a type of "homogeneous power at any level and/or domain - be it the family, the school or the factory - and which allows power to be reduced to a law of prohibition there is an act of speech" (Foucault, 2001a, p.95-96) [2]. In his analysis, the author does not start by criticising the powers of domination and the subjects who develop them, but rather the power relationship itself and understanding how the law - understood not only as the set of laws but also as the apparatuses, institutions and regulations that apply the law - conveys and applies the relations of domination and the elements it affects. It is not a question of analysing the domination of one over another, of one class over another, but of the multiplicity of power relations that are exercised within society. In this way, Foucault inverts the focus of analysis, no longer centred on the figure of the subject who dominates (or the king in his central position), but on analysing the multiple subjections that occur within the social body (of the subjects in their reciprocal relationships). This involves moving from the problem of sovereignty and obedience to that of domination and subjection, in other words, analysing the "fabrication of subjects much more than the genesis of the sovereign" (Foucault, 1999, p.52).

Not considering power as a homogenous phenomenon and as something analogous to the good that some have and others don't is another of the characteristics of Foucault's analysis of power. For the author (1999), power "must be considered as something that circulates, or rather, as something that only works in chains" (p.35), so power relations must be conceived as a particular type of relationship existing in the social body. Power is thus no longer conceived as a good, a property of a few individuals or organisations, but as something that works and is exercised in a network. It is a power that only exists in/on relationships and that works throughout the social body, in the interconnection between different social relationships that are dynamic, mobile and sometimes contradictory, thus involving various forces that clash and oppose each other. In other words, power is not a property that is conquered or acquired, but a variety of strategies, manoeuvres and techniques that are exercised within a network of relationships where forces meet on both sides. This consideration of power implies a re-dimensioning of the readings of the state as the centre and only instance with power. The centralism that traditional political analysis guaranteed the state, by considering it the originator of power relations, is transformed in Foucault. This does not mean, however, that the author neglects the power of the state, but he



does present a displacement/redimensioning of its role in conventional analyses. Rather than denying the power of the state and its institutions, the author believes that the consolidation of national states has led to the state capturing areas of power, transforming them into the most important and centralising form of exercising power. The expansion of the functions and centres of power on the part of the state did not happen because power relations derive from the state itself, but because the state hegemonically took control of many fields and areas of social life, setting up a series of agents and institutions to exercise the various powers. As Foucault (1992) [3] points out, "power is more complicated, much denser and more diffuse than a set of laws or a state apparatus (...) there is, therefore, an 'apex'; but this 'apex' is not the 'source' or the principle from which all power derives as from a luminous focus (...) the apex and its lower elements of the hierarchy are in a relationship of reciprocal support and conditioning; they 'sustain' each other" (p.221). According to this perspective, even when a power claims to be hegemonic, we can't just consider the existence of one power, but of powers, since "a society is not a unitary body in which only one power is exercised, but in reality it is a juxtaposition, a liaison, a coordination and also a hierarchy of different powers which nevertheless persist in their specificity" (Foucault, 1999a, p.239) [4]. In Foucauldian "language", it is a "microphysics of power" that exercises control, surveillance and correction of individuals through a network of micro-powers - institutions and agents - that act on individuals or the community.

Another of Foucault's characteristics of power concerns the need to understand that ideologies are not formed at the base, but rather effective instruments for the production of training and the accumulation of knowledge. Methods of observation, recording techniques and surveillance procedures are devised to create a system of knowledge. In this way, power is exercised based on the formation and organisation of knowledge, which in turn enables the exercise of power - an intrinsic relationship where power is exercised based on the knowledge it generates. When power is exercised over individuals, knowledge is extracted about them by observing them, classifying them, recording and analysing their behaviour and comparing them. It is therefore knowledge that accumulates and allows new forms of control to be exercised. The author (1999b) [5] emphasises that the very exercise of power can create objects of knowledge "It makes them appear, accumulates information, uses them" (p.310), so power creates knowledge and, conversely, knowledge produces effects of power, i.e. power is not exercised without knowledge and knowledge does not exist without producing power. For Foucault, there were two mutations in the technologies of power in Western societies during the 18th century. These transformations led to the emergence of the "disciplinary technology of power" and, at the end of that period, the emergence of a "regulatory technology" that did not replace the former, but utilised it and worked simultaneously with it. The first technology - disciplinary power - instead of focusing on the land and its products, focuses on bodies and what they do. This is exercised daily through a web of surveillance (and not through tributes/obligations or the physical existence of a sovereign). It

is a power essentially centred on the individual body to control the body, its spatial distribution, organisation and activity through disciplinary techniques and procedures. It is an individualising technology of power that is exercised directly on bodies, without brutalising and/or enslaving them - an anatomy power (Foucault, 1999a, p.245). The individual body begins to be seen as a machine on which disciplinary technologies act directly to make bodies useful and submissive and to develop their capacities to the maximum. This new power seeks to control the social body by controlling each of its constituents, so one of the "first great operations of discipline is the constitution of 'living frameworks' that transform confused, useless or dangerous crowds into organised multiplicities (Foucault, 2001a, p.124) [6], not to implant or fix them in place, but to distribute them (in an organised way) and make them circulate (with a logic) in the network of relationships so that they can be observed and controlled. Disciplinary power can therefore be seen as differentiating rather than standardising; rather than tying forces together, it interconnects them, multiplies them and uses them as a whole.

The success of this disciplinary power is due to the instruments and techniques it uses, which Foucault (2001a) calls "surveillance" ("hierarchical gaze"), "normalising sanction" and "examination" (which is a combination of the above in one procedure) (p.143). These techniques make it possible, based on an analysis of each individual, to establish the joint norm that must be followed and, at the same time, to define the differences allowed within it, in other words, the deviations that must be corrected and transformed to fit in with the norm or normalisation. Discipline thus allows the Power of the Norm to emerge.

As mentioned above, the other revolution in the technologies of power took place at the end of the 18th century, with the emergence of a new non-disciplinary technology. It is a technology that does not exclude the disciplinary one but integrates, modifies and utilises it. The object of this technology shifts from individuals in isolation to considering them as a whole - the population. As Foucault (1999) points out, "Discipline tries to govern the multiplicity of men, insofar as this multiplicity can and must result in individual bodies that must be watched, trained, used and, eventually, punished. And then, the new technology that is being installed is directed at the multiplicity of men, not insofar as they are summarised in bodies, but insofar as they form a global mass affected by overall processes that are typical of life. These are processes such as birth, death, production, illness, etc." (p.289). After a technology that operates through individualisation comes another that, instead of acting individually, massifies, which, instead of targeting the "machine-man", invests in the "species-man". A set of processes is thus discovered, such as birth and death rates, production rates and states of health, which can be instruments for reproducing and regulating the population, so that it can be used as a "machine to produce wealth, goods and other individuals" (Foucault, 1999a, p.246). After the discipline exercised over the body - anatomy-power or anatomy-politics" - biopolitics or bio-power is born. The importance of the emergence of this new technology of power is because it introduced a new "character" unknown to classical theories and disciplinary

technologies: the population, considered simultaneously as a political and scientific problem and as a biological and power problem. In addition to introducing this element, bio-power made it possible to consider the nature of phenomena, since its interest lay in collective phenomena that impact the masses and cause economic and political consequences. These phenomena are individually unpredictable and random, but when considered on a collective level, they can be predicted (Foucault, 1999, p.293).

Another innovation of this technology of power is the introduction of mechanisms with functions that differ from disciplinary mechanisms. These functions are mainly predictive, statistical estimates, etc. which, although they have no impact on isolated phenomena or a specific individual, make it possible to intervene at the level of determining collective phenomena. In this way, regulatory mechanisms are created that allow a certain balance to be established in a population. Control will thus be exercised not over the individual body, but rather "through global mechanisms, to act in such a way as to achieve global states of equilibrium and regularity" (Foucault, 1999, p.294). Both powers over individuals and power over populations are based on mechanisms of normalisation that make it possible to establish a distinction between individuals to qualify them, measure them and rank them, taking into account the establishment of a common norm. We can therefore say that the common element between the two technologies is the Norm. It is precisely from the intersection between the norm of discipline and the norm of regulation that the Normalising Society emerges. As Foucault (1999) explains, it acts on the individual body and the population "through a double game of technologies of discipline, on the one hand, and technologies of regulation, on the other" (p. 302), which allows it to control different dimensions of people's lives and populations, through a set of "procedural institutions, analyses and reflections, calculations and tactics" (Foucault, 1992, p. 291). Normalising power in contemporary societies is therefore not exercised by just one institution but by a series of institutions and agents that control, monitor and correct individuals. For Foucault (1999b), "all these institutions - factory, school, psychiatric hospital, prison - do not aim to exclude, if not, on the contrary, to fix individuals" (p. 248) according to a certain norm. It is a network of power that establishes control on an individual or collective basis by creating a series of agents/institutions - or micro-powers - that seek to "reign over the universality of the normative; and each one, at the point where it is, submits bodies, gestures, behaviours, aptitudes, performances" (Foucault, 2001a, p.251). As such, power is exercised through the mediation of several institutions/agents that are unrelated to the state, allowing the effects of power to circulate continuously throughout the entire social body. By spreading socially, these micro-powers have enabled a new "economy of power", in which the effects of power are "spread" throughout the social body, making the activity of controlling, monitoring and normalising as inexpensive as possible (Foucault, 2001a, p.180). These are micro-powers that base their action on normalising technologies and act on a double process, which both homogenises by teaching and shaping individuals to achieve a certain goal and individualises by

determining the differences between individuals to establish levels and deviations, transforming and making these differences "profitable" with the ultimate aim of achieving the common norm.

### **Social intervention under the RSI and the normalising power**

In 2003, the RSI was introduced in Portugal. During the election campaign leading up to the March 2002 elections, the liberal parties criticised the previous policy (Guaranteed Minimum Income - RMG), which they considered ineffective. The media was used to portray the beneficiaries of the policy as having abusive attitudes, lazy behaviour and an attitude of dependency. This justified the need to change the policy and make it capable of "moralising" the use of the benefit and thus taking care of the proper use of public money. We believe that the reinforcement of the "transitional nature" of the policy, as well as the centrality of the "insertion component" (Bill 6/IX) through the (social, parallel and secondary) labour market, show that it was not just a change of name - from Minimum Guaranteed Income to Social Insertion Income - but an ideological transformation. We can therefore say that the election of the centre-right coalition in 2002 made it possible to replace the RMG with the RSI, invoking moralising reasons centred on the negative characteristics of the beneficiary citizens and justifying the insertion of control actions to increase its effectiveness. In 2010, the SII law was amended with the entry into force of Decree-Law 70/2010 of 16 June. The proposed changes were justified by the existence of a global context of economic and financial crisis and were drawn up based on the 2010-2013 Stability and Growth Programme. There was an increase in the selectivity of the measure by changing the conditions of access and the calculation formula, allowing it to be focussed on the "poorest of the poor" and resulting in the expulsion of a considerable number of beneficiaries who, despite remaining in a situation of poverty and social exclusion, no longer met the criteria and consequently no longer received the support. We can see this in the official data (pordata), which shows a decrease in active RSI beneficiaries between 2010 and 2014 (11.7% in 2010, 10.1% in 2011, 9.9% in 2012, 8.7% in 2013 and 7.8% in 2014) and, contrary to what might have been expected (a decrease in the number of poor people), an increase in the poverty intensity rate over the same period (23.2% in 2010, 24.1% in 2011, 27.4% in 2012, 30.3% in 2013 and 29% in 2014). In 2012, the definition and conditions of the RSI were republished by Decree-Law No 133/2012 on 27 June. The changes led to a decrease in the amounts received by beneficiaries and the exclusion of several households, who had not abandoned their situation of poverty, but who no longer met the increasingly selective requirements. The retraction of this policy in Portugal, justified by the government by the need for budget cuts, led to a limitation of social support for the poorest and a replacement of the right/duty by welfare practices, in which the state is placed as a subsidiary of the interventions. Nowadays, the RSI is presented as a social policy to combat poverty and social exclusion, which combines both a cash benefit and an insertion contract/programme. The insertion programme is seen as an essential mechanism for the social insertion of beneficiaries and is conceived as a set of actions

established between the Local Insertion Centre (NLI) and the benefit holder and their household. Failure to fulfil or comply with these actions leads to the termination of the benefit and the impossibility of re-applying for it for a set period.

The RSI and the welfare state in which the measure is integrated can be seen as a regulatory technology or biopolitics, which acts on the lives of populations and whose object is not the individual body, but rather the lives of men, individuals considered as a whole, in this case the population living in poverty. Thus, this type of state can be seen as a strategy for regulating populations, a technology that "addresses the multiplicity of men, not insofar as they are summarised in bodies, but insofar as they form a global mass, affected by overall processes that are proper to life" (Foucault, 1999, p.289). From this perspective, the state, through agents and institutions legitimised for this purpose, determines the regularities and malfunctions of populations and establishes certain balances through a series of regulatory mechanisms. We are not calling into question the central importance that welfare states have had and still have in the lives of populations, but we are proposing a critical reading based on Foucault's analysis of power. This normalising and regulating control is not only carried out by the state, but through a series of organisations, institutions, technical procedures and agents. It is a network of powers, or rather micro-powers, that extend over the individual body and the social body to manage behaviour and govern people's lives. In short, according to Foucault, political power, which is not located in the hands of the government, is exercised through several institutions and agents with a view to regulation. Welfare states have also created spaces for the construction and reconstruction of knowledge-power relations, sustained by the various professions and specialisations that make up the state. It is this knowledge-power that is expressed through norms and allows a standard of normality to be established for individuals through the discourse of laws and social practices. The RSI, as a normalising mechanism, is an example of the so-called life policies that intervene in the phenomena of poverty and social exclusion. In addition to the financial support that the RSI provides to the poorest, it presupposes an integration programme. It is a device that articulates strategies for disciplining bodies and regulating the population, through the surveillance of beneficiaries and the disciplinarisation of different dimensions of their lives.

Through the use of normalising technologies, the SII policy makes it possible to consider individuals either as a whole (homogenised) to mould them to the established norms, or individually, to understand the levels and degrees of existing deviations and thus make differences useful. This power is exercised through microphysics of power, i.e. by a set of institutions (the NLI and the institutions that implement the policy) and agents (professionals who carry out social intervention) who, in addition to exercising normalising power, produce knowledge about the beneficiaries. Power and knowledge are two components of normalisation and regulation, which are partly sustained by the professionals who apply the measures. It is a power of the norm that "works easily within a system

of formal equality. Within a homogeneity that is the rule, it introduces, as a useful imperative and the result of a measure, all the recording of individual differences" (Foucault, 2001b, p.154) [6]. Deviation from the norm socially excludes the individual, while normalisation includes them. The social actors involved in implementing the policy carry out a diagnosis of the beneficiaries to get to know their situation. Information about citizens is "placed at the mercy of those who control it", which allows the technician to fulfil the role of "ideological patrol of the client's personal and social life" (Faleiros, 1997, p.33) [7]. In this way, visibility is centred on those who are controlled and observed and not on those who assume and concentrate the data and information. The social diagnosis of the situation, characterised by in-depth knowledge of the beneficiaries' situation, will serve as the basis for drawing up the integration programme. This programme is an insertion mechanism inherent to the measure and involves constant monitoring, verification of compliance and, in the event of non-compliance, a sanction. It is an examination of the situation of individuals through observation, surveillance and continuous recording of their behaviour to qualify them within normal standards, establish their degree of deviation and adopt individual correction strategies. The integration programme and its follow-up are based on a double procedure of homogenisation and individualisation. Individualised action is a requirement of the measure since it considers that each beneficiary is a case that must be examined to understand their difficulties and thus be able to tailor the responses. In this way, problems are individualised, both in terms of their definition and their treatment, allowing beneficiaries' problems to be considered as pathologies where standards of normality appear as a reference. Beneficiaries are thus made responsible for their situation and are categorised and compared according to a definition of normality. The homogenisation of action, on the other hand, is aimed at integrating the individual beneficiaries into the previously defined and stipulated actions, taking into account what is considered to be the needs of the beneficiaries of the measure and, consequently, what has been politically defined as the actions necessary to socially integrate the beneficiaries.

Through knowledge and technical know-how, professionals exercise power "not with the function of appropriating and withdrawing", but rather of "training", in other words, they exercise "a specific technique of power that takes individuals both as objects and as instruments of its exercise" (Foucault, 2001a, p.143). This normalising power is not an instrument that the professional applies in certain circumstances, but a process that works in the relationship. It should be noted that this is not a majestic or triumphant power, but a power that works subtly and based on a permanent economy, through the permanent use of three instruments: "surveillance, examination and normalising sanction" (Foucault, 2001a, p.143). The evaluation of the implementation of the integration programme can lead, in the event of non-compliance, to the cancellation of the benefit. This evaluation, this exercise of normalising power, uses a specific type of punishment: the normalising sanction, which consists of a specific form of punishment that corrects anything that deviates from the stipulated rule. It is an imposition through subtle mechanisms of compensation and punishment based on which

professionals develop actions to "persuade by mobilising the minimum of explicit coercion for the maximum of adherence" (Iamamoto, 1992, p. 101) [8], thus attenuating tensions and dissatisfaction. It is an exercise in control based on an essentially corrective punishment that aims to reduce deviations and acts on a dual system of gratification-sanction. This normalising form of sanctioning makes it possible to relate the acts and behaviour of individuals to a set that serves both as a space for comparison and as the principle of a rule to be followed. It is therefore a sanction whose function is to "correct the virtues" of individuals and not to repress or atone (Foucault, 1999a, p.227). In short, it is a field of action where the power of sanction is based on micro-penalties "of activity (inattention, negligence, lack of zeal), of behaviour (rudeness, disobedience), of discourse (chatter, insolence)" (Foucault, 2001a, p.149).

## CONCLUSION

According to the argument presented here, it is considered that the practice of social interveners in the application of the RSI policy occurs through the exercise of micro-powers which, in action and direct relationship with the beneficiaries, make it possible to control maladjustments and guarantee the preservation of the socially established order. Power is considered to be an essential element in the practice of these professionals, who work as a means of establishing and monitoring social normality. Professionals who put disciplinary and regulating technologies into practice. Of course, many social interveners don't intend to give their practice a supervisory and controlling character, but their link to an institution and a policy implies relationships of control and verification in which authority (sometimes confused with authoritarianism) and the power to normalise are naturally implicit. Normalising power, although it doesn't appear as one of the express objectives of social intervention, is present in that intervention and is implicitly associated with it. It should be noted that this is not a fatalistic reading, since there is the possibility of resistance, of creating counter-powers. For Foucault, where there is power, there is always freedom, so it is possible to modify the domain of that same power under certain conditions. He believes that no power is entirely controllable and can therefore be changed.

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# ONLINE SURVEY ABOUT DEPRESSION AND E- PSYCHOTHERAPY IN KOSOVO DURING THE COVID-19 OUTBREAK

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## ABSTRACT

The COVID-19 outbreak hit also Kosovo. Experts around the globe call for research and action in mental health field. Kosovo as one LMI country in Europe adapted its responses to those recommended in other countries affected by pandemics. The aim of this study was to understand the level of depression as a result of the COVID-19 situation, possible associations with sociodemographic variables and expectations regarding the e-psychotherapy. It's a cross-sectional study. The participants were 198 respondents recruited online in the period 20.03.20 until 23.04.20, who completed the Albanian version of PHQ-9. Mean score of depression resulted 9.46 (DS = 7.51). 65.2% of participants agreed that the situation has worsened their psychological state; 42.4% had a mild to severe form of depression and 25.3% had minimal symptoms. 18.7% of participants saw iCBT as helpful, 19.7% a little while 58.1% wanted to try it. Significantly higher depression resulted for females and participants with depression diagnosis before. The higher levels of depression correlated significantly with higher expectations of iCBT. Gender, age, education, marital status, previously diagnosed with depression, previously treated with depression and perception of worsened psychological state showed predictive abilities for depression. The situation with Covid-19 has increased depression levels and thus expectations for e-psychotherapy. There is a need to give more space to online treatments. Further studies are needed to better scientifically elaborate these findings.

**Keywords:** *COVID-19, depression, PHQ-9, e-psychotherapy, Kosovo*

## INTRODUCTION

The Coronavirus Disease 2019 (COVID-19) has impacted global health and challenged health systems worldwide in an unprecedented way. Data on the psychological impact of COVID-19 on the general population emerged from many parts of the world. Increased anxiety and poor wellbeing due to COVID-19

have been reported widely globally in USA [1], Asia [2] and Europe [3]. Similarly, worsened depression rates have been reported in UK [4], Greece [5], Italy [6], Spain [7] and China [8]. An actual systematic review of the literature [3] stated that global studies of the general population reveal worsening of psychological wellbeing and higher scores for anxiety and depression compared to the period previous to COVID-19.

Unfortunately, most countries including those with higher GDP were found unprepared in their response to the pandemic and the initial strategies did not include addressing mental health aspects [9]. Subsequently, government and health organization strategies included in recommendations provisions and promotion of digital interventions [9].

The first case with COVID-19 in Kosovo was identified on 13 March 2020 and three days later a Public Health Emergency was announced with strict lockdown restrictions put in place. At the end of survey (23.04.2020) there were 669 identified cases and 19 deaths. As of 21.04.2020, 12 doctors and 16 nurses in the workplace have also been infected.

Kosovo, like many other post-war societies, experienced many challenges, including economic stagnation, widespread poverty, high unemployment, the movement of population from rural to urban areas, and poor quality of life [10]. Mental health services in Kosovo were providing limited psychological interventions during the COVID-19 outbreak. While community mental health centers were focusing in supporting patients with severe mental health problems in the community, face to face support for milder cases was restricted. However, four Community Mental Health Centres in the towns of Prizren, Prishtina, Mitrovica and Gjilan offered online therapy for depression (iCBT) as part of an ongoing research project called Implementall, which is funded by European Commission, Horizon 2020 framework.

Studies conducted in Kosovo that provide data on depression levels are scarce. In a study which assessed a sample of 249 respondents (17-70 years old,  $M_{age} = 36, 6$ ) from the general population of the Drenica region using Beck Depression Inventory and found depression at the clinical level in 10, 7% [11]. There is a dearth of evidence regarding prevalence rates for common mental health problems in Kosovo. The few studies that have been conducted so far are small, non-representative, have methodologic limitations and none of the assessments used have been validated for the population.

The aim of this study is to present rates of depression during the COVID-19 pandemic in Kosovo and explore possible associations with sociodemographic variables. Secondary objectives were (a) to test the feasibility of conducting online mental health research in Kosovo, (b) to evaluate opinions about the impact of the pandemic in mental health and (c) to investigate perceptions about internet supported mental health interventions (e-psychotherapy).

## MATERIALS AND METHODS

A cross-sectional design was utilized and a snowball recruitment strategy was applied. Participants were recruited through a web-based survey disseminated through several online channels including Facebook, the webpage of Prizren Center for Mental Health, the Albanian IFightDepression page and the announcements on some online portals (Indeksonline.net; 040online.info; Komuna e Prizrenit). Participants gave online consent to assure that their participation was voluntary, confidential and unidentifiable. The questionnaire was delivered and collected through Google Forms. The data were processed during a 35-day period (20.03-23.04.2020). Socio-demographic information was obtained regarding age, gender, place of residence, marital status, employment status, socioeconomic status, level of education, previous diagnosis and treatment of any mental illness or depression, and expectations regarding e-psychotherapy. Participants also completed the Albanian version of the Patient Health Questionnaire (PHQ-9) [12] translated and back-translated by the authors of this paper. The PHQ-9 scale is a self-reporting tool designed to measure nine depressive symptoms that occurred in the past 2 weeks, based on the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition—DSM-IV diagnostic criteria. The responses were summed to total score ranging from 0 to 27. PHQ-9 seems to be a useful tool to recognize not only major depression but also subthreshold depressive disorder in the general population (Martin et al, 2006). Psychometric properties for the PHQ-9 have been shown to be good, with internal consistency in the Cronbach's range  $\alpha = .86 - .89$  and a test-retest reliability of  $r = .84$  (22). Based on previous known guidance, depressive symptoms were classified by severity, into minimal (scores of 0-4), mild (5-9), moderate (10-14), and severe (15-27). To evaluate opinions about the impact of the pandemic in mental health, the question formulated by the authors was used (Do you think that this coronavirus pandemic situation has worsened your mental state?) Which allowed the possibility of the answer (Yes) or (No) to the deterioration of psychological state. To investigate perceptions about internet supported mental health interventions (e-psychotherapy) the question formulated by the authors was used (What are your expectations for help from psychotherapy through the internet?).

Approval for this research was obtained from the Ethical-Professional Committee of the University Clinical Hospital Service of Kosovo, no. 836, dated 05.05.2020. Data processing was performed with SPSS 21.0 and Microsoft Excel 2007.

## RESULTS

We recruited 198 participants (149 females or 75.3%, 47 males or 23.7% and two missing information or 1%), who were between 18 and 64 years old with average age of 27.04 years ( $SD = 10.81$ ). Mean overall depression score was 9.46 ( $SD = 7.51$ ), 10.30 for women and 6.87 for men. Prevalence of depression (PHQ-9  $\geq 10$ ) was reported by 42.4% of the participants and 25.3% had minimal

depressive symptoms. Most of participants (80.8%) had not been previously diagnosed with any mental health problems, 19.2% had been previously diagnosed with depression and 14.5% had received treatment for depression

Mann-Whitney test revealed significant gender differences of depression scores ( $Md_{\text{females}}=9$ ,  $N=149$ ;  $Md_{\text{males}}=6$ ,  $N=47$ ;  $Z=-2.570$ ,  $p<.01$ ). Significant gender differences were found for both somatic ( $Md_{\text{females}}=5$ ,  $N=148$ ;  $Md_{\text{males}}=3$ ,  $N=46$ ;  $Z=-2.378$ ,  $p<.01$ ) and cognitive/affective ( $Md_{\text{females}}=4$ ,  $N=148$ ;  $Md_{\text{males}}=3$ ,  $N=47$ ;  $Z=-2.399$ ,  $p<.01$ ) subscales.

We found no difference in depression levels between those who were previously treated for mental health problems and those who were not. Individuals who were diagnosed with depression but had not received treatment had higher depression levels than those who had not been diagnosed with depression ( $Md_{\text{dgyes}}=29$ ,  $N=36$ ;  $Md_{\text{dgno}}=23.5$ ,  $N=154$ ;  $Z=-2.131$ ,  $p<.03$ ).

Kruskal-Wallis analysis revealed significant differences by levels of education,  $X^2(4, n=194)=10.799$ ,  $p<.02$ ; whereas respondents with masters ( $Md=33.5$ ) had the highest depression scores as compared to elementary levels ( $Md=33$ ) bachelors ( $Md=26$ ) and secondary high levels ( $Md=18$ ).

Sixty-five percent of the participants agreed that COVID-19 situation had impaired their mental health. Participants who thought that the COVID-19 had worsened their mental health had significantly higher levels of depression than those who reported the opposite ( $Md_{\text{yes}}=25$ ,  $N=124$ ;  $Mdn_o=23.5$ ,  $N=64$ ;  $Z=-3.760$ ,  $p<.00$ ).

A limited proportion of participants thought that e-psychotherapy can be helpful ranging from 18.7% who thought it certainly can be helpful to 19.7% who reported that it may be a little helpful. However, 58.1% of the participants stated that they would want to try e-psychotherapy, should they need therapy. Significant differences by expectations regarding e-psychotherapy were noted,  $X^2(3, n=194)=14.227$ ,  $p<.02$ ; whereas group respondents who answered e-psychotherapy will me help little ( $Md=10$ ) had the higher depression scores compared to the group who would like to try it ( $Md=8$ ), those who thought that it would help very much ( $Md=7$ ) and those who believed it would absolutely not help ( $Md=0$ ). The Mann-Whitney test showed that significant differences of depression scores were only between group who did not believe e-psychotherapy would help at all and each of three others groups. There has also been a positive significant correlation between expectations regarding e-psychotherapy and levels of depression ( $r=.158$ ;  $p<.026$ ). Cross-tabs showed no significant association between levels of expectations regarding e-psychotherapy and gender, age-group, level of education, marital status, employment status and socio-economic status.

Kruskal-Wallis analysis revealed no significant differences by marital status, employment status, socio-economic status and age-group.

A multiple standard regression analysis was run to predict depression from gender, age, education, marital status, employment, socio-economic status, previous treatment for mental health problems, previously diagnosed with depression, previously treated for depression, perception of worsened psychological state from COVID-19 situation and expectations for help from e-psychotherapy. All the independent (or predictor) variables are entered into the equation simultaneously. The model as whole reaches significance,  $F(11, 183) = 4.569$ ,  $p < .000$ ,  $R^2 = .226$ ; and the total variance explained by the model as a whole was 22.6%. Aside from employment, socio-economic status, previous treatment for mental health problems and expectations for help from e-psychotherapy; all other variables added statistically significance to the prediction,  $p < .05$  (Table 1).

**Table 1.** *Multiple Regression Analysis Summary for variables and Depression (PHQ-9)*

| Variable   | B      | SEB   | Beta  | Sig.  |
|--|--------|-------|-------|-------|
| Age  | .187   | .075  | .269  | .014* |
| Gender   | 3.386  | 1.281 | .193  | .009* |
| Education  | -2.209 | .748  | -.228 | .004* |
| Marital status   | -3.218 | 1.165 | -.263 | .006* |
| Socio-economic status  | -1.500 | .967  | -.113 | .122  |
| Employment   | -.533  | .713  | -.063 | .456  |
| Previous treatment for mental health problems others than depression | 1.999  | 1.967 | .075  | .311  |
| Previously diagnosed with depression                                 | 4.620  | 1.974 | .243  | .020* |
| Previously treated with depression                                   | -4.909 | 2.295 | -.233 | .034* |
| Perception of worsened psychological state from COVID-19 situation   | 3.879  | 1.094 | .245  | .001* |
| Expectations for help from e-psychotherapy                           | .436   | .629  | .048  | .489  |
| Constant   | 5.759  | 3.970 |       | .149  |

<sup>a</sup>Dependent variable=PHQ-9 sum score

## DISCUSSION

This study recruited online 198 participants, from the general population in Kosovo, within thirty-five days. The participants gave online informed consent and completed questionnaires as well as demographic data. The questionnaires were fully completed, and we had no missing data, 1/3 of participants ( $N=67$ ) did not provide their email, although they had internet access. This is one of the first studies in Kosovo that has been conducted online and it indicates that this method is feasible and acceptable by the general population. Caution should be taken when email addresses are required, such as in cohort studies, as this approach may largely limit the number of potential participants.

A considerable majority of participants in Kosovo (65%) believe that COVID-19 situation has impaired their psychological health. This result is significantly higher than reports in USA - 36% [1] and China - 35% [2]. With 42.4% of the participants reporting depression symptoms the level of depression in this sample is more than triple of the reported average lifetime and 12-month prevalence estimates of major depression in low and middle-income countries 11.1% and 5.9% respectively [13].

Our findings are also nearly double higher than the results of similar global studies that have used PHQ-9 and were conducted during the pandemic, such as the study in Albanian students (25.2% - 25.6%) [14] and a study in the UK (22.12%) [4].

Our findings are higher than a online survey with 217 students in China [2] found that 35.5% of participants were in a state of depression; but it is comparable as in study [8] which reports prevalence at 48.3%.

The finding that women are significantly more affected by depression than men is in line with established evidence about gender differences in depression. Participants who were previously diagnosed with depression (but not received treatment) had higher levels of depression than those who had no history of depression. This supports the hypothesis that the situation caused by COVID-19 may be exacerbating the condition of people with pre-existing disorders. It is interesting to note that both extreme levels of schooling indicate higher levels of depression. In this sample depression is predicted from gender, age, education, marital status, previous depression diagnosis, previous depression treatment and perception of worsened mental health due to COVID-19. No significant differences in the levels of depression relating to marital status, employment and socio-economic status were found. This result can be explained in part by the fact that we may be facing reactive type depression due to the challenging life circumstances.

Considering the growing importance of e-psychotherapy during lockdown and social distancing we tested participants' acceptance of this approach; in this study we have found that 38.4% thought e-psychotherapy can be somehow helpful and 58.1% were willing to try it. This is considered particularly positive given that depression causes feelings of hopelessness and negatively impacts help-seeking behavior. It is also in line with the suggestions a shift towards online prevention, treatment, and care for depression is warranted [15].

## **Limitations**

We should mention here some limitations of this study. Firstly, the cross-sectional design does not allow for any assumptions to be made regarding the causal relationship of the variables. Conducting an online study may also result in bias regarding respondents who are affected by the digital divide and it excludes

those who do not have access, skills or finances to utilize technology. Our sample is very young and older people above 64 years of age are not represented. As such our findings may not be representative of the wider Kosovar society. Another shortcoming may be the source of recruitment was the webpage of the main author who is a psychiatrist and may be followed by individuals who may have concerns about their mental health, as such our sample may be disproportionately affected by depression compared to the general population. We have measured the prevalence of depression only a month after the pandemic outbreak, and this could be a limitation due to being too early into the pandemic. Furthermore, this study used self-reported questionnaires to measure psychiatric symptoms and clinical diagnosis were made.

## CONCLUSION

In Kosovo the emergence of new mental health problems and the worsening of psychiatric disorders such as depression are becoming more evident, and larger and longitudinal studies are required to establish further evidence. High prevalence of depression in this sample is concerning, especially because the mental health services provided reduced support during the pandemic. Kosovo is a middle-income country, with underfunded mental health services and where the treatment gap for mental health problems before the pandemic was estimated to be around 80%. There are real concerns that this gap substantially increased during COVID-19 response due to reduced service provisions and increased need for treatment. As such, mental health should be included in government's health response strategies and further funding should be dedicated to mental health services. There is a clear need for introducing innovative services including digital interventions, alongside traditional approaches, and this study demonstrates that these solutions are acceptable and valued by the target population.

This study indicates that online mental health research in general population in Kosovo is feasible, but caution needs to be taken when email addresses are required as a limited number of individuals utilize them. The use of social media seems to be considerably higher than email usage, therefore we would recommend considering these limitations in future online research or digital interventions.

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